COMMERCIAL CAR JOURNAL

THE MAGAZINE FOR FLEET OPERATORS

OCTOBER 1946

RUE LIERARY

DET 23 1945

DETROTT

ECHNOLOGY DEFT!

CITY COAL CO



for strength and lugging power...

STANDARDIZE ON

When fuel deliveries reach their peak, fortunate is the distributor who has standardized on Reo trucks and tractors. Massive, cold-riveted frames — heavy-duty axles, wheels and springs—extra-strength in every chassis part—all assure day-in, day-out handling of capacity loads. Abundant lugging power for the heavy loads, long hauls and steep grades is

nat

ver the

onits,

provided by the precision-built engines —and there's speed to spare.

Reo More-Load design gives more load space per inch of wheelbase, with balanced weight distribution and shorter turning radius. Check on the new Reos today. There's a dealer, distributor or factory-operated branch nearby.

REO MOTORS, INC. • Lansing 20, Mich.

1904 - AMERICA'S TOUGHEST TRUCK - 1940



175 BASIC Job-Rated CHASSIS MODELS

Whenever you buy trucks, it will pay you to remember . . . "Only Dodge Builds 'Job-Rated' Trucks."

From a range of 175 "Job-Rated" chassis models, your Dodge dealer has the engineering data to select the right truck to fit your job, save you money.

You simply tell your Dodge dealer what loads you haul, and he'll specify the right capacity. Tell him the type and size body you want, and he'll specify the right wheelbase for correct load distribution. Tell him your grade and speed requirements, and he'll specify the right rear axle and gear ratio. All other units such as engine, clutch, transmission, springs and brakes . . . will be Job-Rated for top performance with your loads over your roads.

For maximum economy of operation-for long-lasting dependabilityget the one truck that best fits your job . . . the right Dodge Job-Rated truck!

DODGE DIVISION OF CHRYSLER CORPORATION

Tractors in 14 conventional cab mor'els to accommodate maximum gross tractor-trailer weig! its up to 40,000 lbs.



dependable

our way of doing business...it's

Specify a Cummins Diesel and you can depend upon prompt and competent service from a nationwide dealer organization. You can depend upon the Factory to stand behind that engine throughout its entire work-life. You can depend upon all this because with Cummins, dependable is more than a word . . . it's our way of doing business.

CUMMINS ENGINE COMPANY, INC., COLUMBUS, INDIANA





Yesterday, a Promise Today, a Reality

Two years ago Eaton promised that the advantages of the Eaton Rotor Pump would be made available in pumps for a wide range of uses—not only for engine lubrication, engine cooling, and hydraulic transmissions, but also for fuel supply, servo-steering, vacuum boosters, hydraulic top-lifts, hydraulic window-lifts, and a number of other servo applications.

Quiet operation, adequate pressure and capacity at all speeds and temperatures, quick priming, continuous pull and uniform flow, and high efficiency under all operating conditions — these are advantages inherent in every Eaton Rotor Pump.

Today, research and product development have been completed to the point where designs for all of the above applications are available.

Eaton engineers will welcome the opportunity to discuss the application of the Eaton Rotor Pumps to engines, vehicles, and equipment now in design.

EATON MANUFACTURING CO. • Wilcox-Rich Division
9771 French Road Detroit 13, Michigan

EATON ROTOR PUMPS



YOUR SHOP is equipped with the right tools for ALL jobs. PERMATEX FORM-A-GASKETS are just like tools...each one does certain kinds of work better than the others!

FORM-A-GASKET No. 1 (a paste) sets fast but not too fast for use on large surfaces. It dries hard but does not become brittle. It's a swell product for making pressure-tight, leak-proof, permanent unions even when surfaces are warped.

FORM-A-GASKET No. 2 (a paste) sets slower than No. 1. It dries to a tough, pliable layer with plenty of "cushion". It resists high pressures, continual vibrations and disassembles very readily.

AVIATION FORM-A-GASKET No. 3 (a brushable, self-leveling liquid) sets into position and dries to a tacky paste. It will not run even when heated to 400° F. . . . nor will it become hard or brittle at temperatures down to 70° F. below zero.

ALL TYPES OF FORM-A-GASKET PRESERVE ALL TYPES OF GASKETS!



Остовек, 1946

d

d

at

11

in

en

ve

on an

AL

Use postage-paid card inserted at page 59 for free information on advertised products

.

Add Thousands of Sitted Miles to

To GET longer, more efficient and economical service from your buses — to make bearings, pistons, rings, cylinders and other vital engine parts last for extra thousands of miles — use Texaco D-303 Motor Oil, rather than non-additive motor oils.

Texaco D-303 Motor Oil has strong detergent and dispersive qualities. It greatly reduces engine wear because it cleans as it lubricates — holds deposit-forming materials in suspension until drained. It keeps valves active and rings free, assuring proper seal—gives you more power with less fuel, prolongs engine life, saves you many dollars annually on maintenance.

To make rear-end and transmission gears operate more smoothly, last longer — use Texaco transmission and differential lubricants.

For Texaco Products and Lubrication Engineering Service, call the nearest of the more than 2300 Texaco distributing plants in the 48 States, or write The Texas Company, 135 East 42nd Street, New York 17, N. Y.

TUNE IN THE
TEXACO STAR THEATRE
EVERY SUNDAY NIGHT
— CBS



Bearings

Pistons and Rings

Gylinders



Lubricants and Fuels

FOR THE TRUCKING INDUSTRY

Остовен, 1946

Use postage-paid card inserted at page 59 for free information on advertised products

5



KRAFT SYSTEM

Balanced RECAPPING

Stethoscope inspection that detects hidden damage in worn truck tires by sound is an exclusive Kraft System way of assuring dependable, extra long mileage before recapping is recommended. And, with General Tire materials, this factory-control method gives you the same tread quality as the famous General Truck Tire. Coast-to-coast... the Kraft System is scientifically uniform for your protection.

THE GENERAL TIRE & RUBBER COMPANY . AKRON, OHIO









leadqu Palanced RECAPPING KRAFT SYSTEM

Aberdeen, Washington, General Tire Service Akron, Ohio, General Tire Service, Inc. Alma, Mich., Giles Tire Service Alpena, Michigan, Richards & Hodapp Alton, Illinois, Alton Tire Sales Co. Albuquerque, N. M., Albuquerque Tire Co. Anderson, S. C., Watt's Service Station Anniston, Alabama, Lena Styles Tire Co. Appleton, Wisconsin, Ray's Tire Co. Ashland, Kentucky, Wurts Brothers Atlanta, Georgia, General Tire Service Co. Aurora, Ill., Aurora Tire & Battery Service

Atlanta, Georgia, General Tire Service Co.
Aurora, III., Aurora Tire & Battery Service
Baltimore, Maryland, O'Toole General Tire Co.
Batavia, New York, Harry E. Slocum, Inc.
Battle Creek, Michigan, Bill Wood's Auto Serv.
Bellefontaine, Ohio, Logan Tire Co.
Benton Harbor, Michigan, Benson Tire Service
Bethlehem, Pa., J. Dorfman Tire Co.
Binghamton, N.Y., Tom Lawler General Tires, Inc.
Birmingham, Ala., Drennen General Tire Co.
Boise, Idaho, Hardy Bros.
Boston, Mass., General Tire Co.
Brodford, Pa., Motor Inn Filling Station
Bridgeport, Conn., Bridgeport Gen. Tire Co.
Bronx, N. Y., Bronx General Tire Co.
Bronx, N. Y., Bronx General Tire Co.
Brooklyn, N. Y., Kings County Gen. Tires, Inc.
Brooklyn, N. Y., Kings County Gen. Tires, Inc.
Brooklyn, N. Y., Farshall-Dowdall Gen. Tires
Burlington, N. Y., Farshall-Dowdall Gen. Tires
Burlington, V., Yandow Motor Co.
Butter, Pa., Ray Andre
Butte, Mondana, Knievel Tire Service
Camden, N. J., Camden Storage Battery Co.

Butter, Pa., Kay Andre
Butter, Montana, Knievel Tire Service
Camden, N. J., Camden Storage Battery Co.
Canton, Ohlo, Sampson General Tire Co.
Ceder Rapids, Iowa, Allen Motor Co.
Chambersburg, Pa., William R. Wilder
Charleston, W. Va., J. E. Ratliff, Inc.
Charlottes, N. C., Myers Tire Co.
Charlottesville, Va., Tire Recapping Corp.
Chattanooga, Tenn., Sidney Socit Tire Co.
Cheyenne, Wyo., Chief Oil Corp.
Chicago, Illinois, Dunne General Tire Co.
Chico, Calif., Jones Auto Service
Chiclicothe, Ohio, Art Howson's Tire Service
Cincinnati, Ohio, Sohngen & Bischoff
Clarksburg, W. Va., Shell Super Service
Cleveland, Ohio, Shea General Tire Co.
Colorado Sprinss, Colo., Dostal-Howard Tire Co.
Columbus, Ohio, Maize General Tire Co., Inc.
Corpus Christi, Texas, Dickenson Gen. Tire Service
Covington, Va., County Motors
Crawfordsville, Ind., Dice Tire Service
Dallas, Texas, Daltex Company, Inc.

Crawfordsville, Ind., Dice lire Service

Dallas, Texas, Daltex Company, Inc.
Danielson, Conn., Danielson Oil Co., Inc.
Danville, Illinois, George B. Satterwhite Co.
Davenport, Iowa, Callen Tire Sales
Dayton, Ohio, Knapp General Tire Service, Inc.
Deadwood, S. D., Eddie's Tire & Glass Service
Denver, Colo., Joe Kavanaugh, Inc.
Des Moines, Iowa, Iles-McKinney & Wolf
Detroit, Mich., General Tire Service
Dover, N. J., Schwalb Tire Co.
Dunkirk, N. Y., Bridge General Tire

Elizabeth, N. J., Abbott-Wright Tire & Treading
Elizabeth, N. J., Abbott-Wright Tire & Treading
Clinia, N. Y., McKinnon General Tire Co.
El Paso, Texas, J. R. Turner
Elyria, Ohio, George Hermann
Erie, Pa., Chaffee Tire Co.
Eureka, Calif., James S. Cloney
Evansville, Ind., Van Winkle Tire Sales

Evansville, Ind., Van Winkle Iire Sales
Fargo, N. D., Haggari's Service, Inc.
Flint, Michigan, Flint General Tire Co.
Fond du Lac, Wisconsin, Hayward Tire Co.
Fort Dodge, Iowa, Tire Recappers Co.
Fit. Lauderdale, Fla., Bill Acenbrack Co.
Fort Wayne, Ind., Sasketter General Tire Co.
Ft. Worth, Texas, General Tire Service
Fremont, Neb., Standard Parts Co.
Fremont, Ohio, Hamilton Tire & Battery
Fresno, Calif., LeMoss-Smith Tire Co.
Salesaville, Ela. Libergite Chauselet Co. Inc.

Fresno, Calif., LeMoss-Smith Tire Co.
Galnesville, Fla., University Chevrolet Co., Inc.
Galveston, Texas, Adolphus Tire Co.
Gettysburg, Pa., Reel Tire Co.
Goldsboro, N. C., Prince Tire Co.
Grand Rapids, Michigan, Bill Elder
Green Bay, Wisc., Green Bay Tire Service
Greensburg, Pa., A. L. McClintock
Greensburg, Pa., A. L. McClintock
Greenwold, Miss., Short Tire & Oil Co.

Harlan, Ky., Harlan Retreading Co. Hartford, Conn., The Auto Tire Co., Inc.

Harrisburg, Pa., V. D. Leisure Co.
Harrisonburg, Va., Glen Shomo
Hayward, Calif., General Tire Sales & Service
Hickory, N. C., Hickory Tire & Battery Co.
High Point, N. C., Greene Tire Co.
Holland, Mich., Bill's Tire Shop
Homell, N. Y., Hornell General Tire Service
Houston, Texas, General Tire Sales Co.
Huntsville, Ala., Huntsville Tire Co.
Hutchinson, Kans., Glenn Sheets Gen. Tire & Batry.

Indianapolis, Ind., General Tire Co. Inglewood, Calif., Inglewood Tire Service

Inglewood, Calit., Inglewood Tire Service
Jackson, Mich., General Tire & Treading, Inc.
Jackson, Miss., Gear Tire & Service, Inc.
Jacksonville, Fla., Pruitt Tire Co., Ltd.
Jamestown, N. Y., Emblem Oil Co.,
Jersey City, N. J., McGuinness General Tire
Co., Inc.
Johnstown, Pa., The Del Boring Tire Service

Kalamazoo, Mich., Otto Kihm Tire Co.
Kalispell, Montana, Kalispell Tire Service
Kansas City, Mo., McDowell Tire Co.
Kingsport, Tenn., Young's Tire Service
Klamath Falls, Oregon, Monarch Service Station
Knoxville, Tenn., General Tire Sales Co.

Knoxville, Tenn., General Tire Sales Co.

Lansing, Mich., Roberts Tire Sales, Inc.

Lawrence, Mess., Albert E. Schlott

Lawrence, Mess., Albert E. Schlott

Lewaton, Tenn., McDowell Tire Co.

Lewiston, Idaho, General Tire & Retreading Co.

Lewiston, Idaho, General Tire & Retreading Co.

Liberty, Ky., Liberty Tire & Recap Co.

Liberty, Ky., Liberty Tire & Recap Co.

Lima, Ohlo, W. A. Pilaum

Lodi, Calif., Holz Tire & Recap Service

Long Beach, Calif., Richardson Tire Co.

Long Island City, N. Y., Astoria Tire Co.

Long Island City, N. Y., Astoria Tire Co.

Los Angeles, Calif., Aves Tire Service

Louisville, Ky., Hurry-Up Broadway

Lynchburg, Va., The Lynchburg Garage

Madison, Wisc., Monona Tire Company, Inc.

Louisville, Ny, Turny-Up broadway
Lynchburg, Va., The Lynchburg Garage

Madison, Wisc., Monona Tire Company, Inc.
Malvem, Ark., Malvern Tire Co.
Marietta, Ohio, The Tire Shop
Massillon, Ohio, Sampson's General Tire
McAllen, Texas, General Tire Sales Co.
McKinney, Texas, Tunnell Tire Co.
Meadville, Pa., Warren C. Smith Motors
Memphis, Tenn., Steepleton General Tire Co.
Miami, Fla., General Tire Co. of Miami
Middletown, Ohio, Russ Dempster Gen. Tire Sales
Milwaukee, Wisconsin, General Tire Service, Inc.
Minneapolis, Minn., The General Tire Co.
Mobile, Ala., Delaney Specialty Co.
Mohitevideo, Minn., Anderson's Super Service
Montgomery, Ala., Moody Tire Service, Inc.
Montevideo, Minn., Anderson's Super Service
Montgomery, Ala., Moody Tire Service, Inc.
Muncie, Ind., Clark's Service Co., Inc.
Munfresboro, Tenn., McDowell Tire Co.
Nacogdaches, Texas, Nacogdaches Tire Co.

Murfreesboro, Tenn., McDowell Tire Co.

Nacogdaches, Texas, Nacogdaches Tire Co.
Napoleon, Ohlo, E. V. Austermiller
Nashville, Tenn., General Tire Co.
Newark, N. J., McCarthy & Sharkey
Newark, N. Y., McDougall's Service Garage
Newburg, N. Y., Harvey Brothers
Neweastle, Ind., Henry County Tire Store
New Haven, Conn., Gerry Stevens, Inc.
New London, Conn., Tire Service Co.
New Orleans, La., Jimmie Hanemann Tire
Service, Inc.
New York City, N. Y., The New York General
Tire Co.
Niagara Falls, N.Y., Kelly-Horak Gen. Tire Co., Inc.
Norfolk, Va., Jonnes Tire Co.
Nornistown, Pa., Reiff & Stephens
Norwich, Conn., A. J. Senft & Son
Ocala, Fla., Jack Tucker's Service

Ocala, Fla., Jack Tucker's Service Oklahoma City, Okla., Eckhard Morse General

Oklahoma City, Ohio,,
Tires, Inc.
Olean, N. Y., W. L. Sullivan & Co.
Omaha, Nebr., Miller-Knuth Chevrolet Co.
Oneonta, N. Y., Kniffen Tire Service
Orange, N. J., Lackswanna General Tire Co.
Orlando, Fla., King's General Tire Service

Orlando, Fia., King's General Tire Service Paducah, Ky., Potter Tire & Battery Co. Painesville, Ohio, Hach's Auto Service Panama City, Fla., Central Tire Service Paris, Illinois, Paris General Tire Co. Parkersburg, W. Va., Mahone Tire Service Paterson, N. J., Brustlin Bros. Peoria, Ill., Godel-Howland Philadelphia, Pa., Carnell & Bradburn Piqua, Ohio, McShane Tire Sales Pittsburgh, Pa., Campbell General Tire Co.

Pittsfield, Mass., Pittsfield Retread & Tire Co. Pontiac, Illinois, Potters Tire Hospital Pontiac, Michigan, Pontiac General Tire Co. Portland, Oregon, Commercial Tire Co., Inc. Pottsville, Pa., Leisure-Black Poughkeepsie, N. Y., Gauthier General Tire Provo, Utah, Morain General Tire Service Providence, R. I., General Tire Service, Inc. Pueblo, Colo., E. E. Chrisman

Queens Village, N. Y., Breitfeller Sales, Inc. Rapid City, S. D., Eddie's Tire & Glass Service Reading, Pa., General Tire Co. of Reading Reidsville, N. C., Reidsville Tire Co. Richmond, Va., Marlowe Tire Co. Rio Vista, Calif., Holz Tire & Recap Service Riverside, Calif. Rome's Tire & Auto Supply Rochester, N. Y., ScanlowsLewis Gen. Tires, Inc.

Riverside, Calif., Rome's Tire & Auto Supply Rochester, N. Y., ScanlombLewis Gen. Tires, Inc. Sacramento, Calif., Earl C. Reed Saginaw, Michigan, Valley Tire & Repair Co. Salem, Oregon, State Tire Co. Salinas, Calif., Don Hultz Salt Lake City, Utah, Wheeler Gen. Tire Co. San Angelo, Texas, Red Covington Tire Service San Bernardino, Calif., General Tires Service Co. San Jose, Calif., Statt General Tires, Inc. Sandusky, Ohio, Brinker's Service Santa Monica, Calif., Link Anderson, Inc. Santame Lake, N. Y., Adirondack Tire Service Scanton, Pa., A. H. Steppacher Seattle, Wash., General Tire Co. Sharon, Pa., John B. Lewis Sheboygan, Wisconsin, Grasse Bros. Oil Co. Sioux City, Iowa, O'Keefe General Tire Co. South Bend, Ind., The Singer General Tire Co. South Bend, Ind., The Singer General Tire Co. South Bend, Ind., The Singer General Tire Co. Spokane, Wash., Tire Service Co. Steubenville, Ohio, Shaffer's General Tires, Inc. St. Louis, Mo., General Tire Co. of St. Louis St. Paul, Minn., General Tire Co. of St. Paul Syracuse, N. Y., Syracuse General Tire Corp.

Tacoma, Wash., Alger Tire Co.
Tampa, Fla., The Pioneer Tire Company, Inc.
Toledo, Ohio, Richard General Tire Co.
Traverse City, Mich., Doug. Linder Tire Co.
Troy, N. Y., Williams Tire & Rubber Co., Inc.
Tulsa, Okla., Murphy Tire Co., Inc.

Uniontown, Pa., Steiner Service Co. Utica, N. Y., Geo. L. Aitken, Inc.

Vancouver, Wash., McNab's Service Victoria, Texas, Allen Tire Recapping Service

Victoria, Texas, Allen Tire Recopping Service
Waltham, Mass., Roy Johnston's Tire Shop
Warren, Ohlo, Warren General Tires
Washington, D. C., Tocker General Tire Co.
Watertown, N. Y., Holton & Teghtmeyer, Inc.
Watsonville, Calif., Watsonville Tire Co.
Wichita, Kans., Boone-Scotty Gen. Tires, Inc.
Wilkes-Barre, Pa., McCarthy Tire Service
Wilmington, Del., C. W. Hazel
Winona, Minn., Kalmes Tire Service
Winston Salem, N. C., Parrish Tire Co.
Worcester, Mass., Bowker-Hamblin-Malmquist,
Inc.

Yonkers, N. Y., Yonkers General Tire York, Pa., Huber Tire Co. Youngstown, Ohio, Safety Tire Co.



original

recap

WHIZ BRAKE FLUID

ASSURES SMOOTH, SAFE STOPS AT ANY TEMPERATURE!

No matter how low the temperature drops this winter—
no matter how high it may climb next summer—you can be sure
of smooth, safe stops when you use genuine Whiz No. 3
Hydraulic Brake Fluid! It retains its viscosity at any
temperature apt to be encountered in fleet service—will not
congeal in winter or thin out in summer! It will not evaporate . . .
is harmless to rubber and metal . . . assures proper lubrication
of the system . . . mixes with all approved fluids. Be sure of
efficient braking the year 'round—use genuine Whiz No. 3
Hydraulic Brake Fluid. R. M. Hollingshead Corporation,
Camden, New Jersey; Toronto, Canada. Warehouses in Dallas,
San Francisco and Chicago.



The Favorite Spark Plug for Tough Jobs . . .

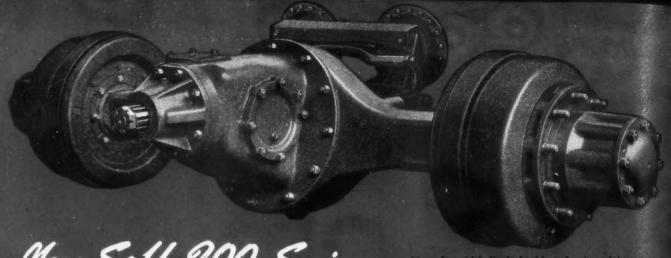
CHAMPION



On most construction jobs, dependable gas engine power is essential. Such tough and rugged service calls for day-in-and-day-out dependability from spark plugs—and here, as in all types of tough hauling and highway service, Champion Spark Plugs are preferred and used by the overwhelming majority. Here's plain, powerful evidence that Champions make every engine a better performing engine in buses, cars, or trucks.

CHAMPION SPARK PLUG COMPANY, TOLEDO 1, OHIO

FOLLOW THE EXPERTS . . . SPECIFY DEPENDABLE CHAMPIONS FOR YOUR FLEET



New S&U 200 Series
Single-Speed Double-Reduction*

New bypoid-belical double-reduction drive ... new torsion-flow "Axaloy" axle shafts ... new inter-9-16 tooth combination differential ... new interjacent pinion shaft location ... plus scores of other modern features. Data on ALUMINUM bousing, brake shoes and hubs on S Series for weight saving available upon request.

READY NOW! TWO NEW HEAVY-DUTY AXLES!

Two new tough-as-nails Timken axles are ready to whip your heavy-duty hauling problems—the new S and U-200 Single-Speed Double-Reduction and the new S and U-300 2-Speed Double-Reduction Axles.

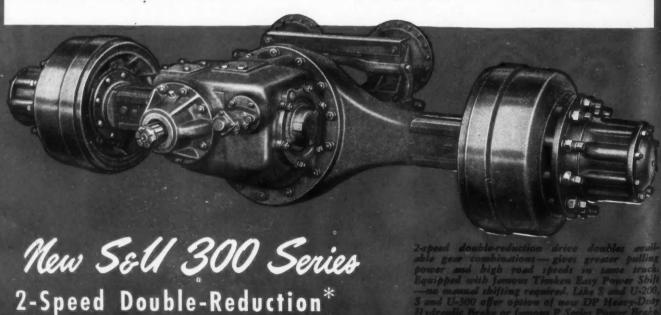
Both are designed for modern high-power engines—the S Series for loads over 18,000 pounds, and the U Series for heavier loads and off-the-road operation. Both are bears for punishment—have more up-to-theminute features than you can shake a prop shaft at. Both are in *full production now*—the only postwar heavy-duty axles ready to pitch in and start working for you immediately.

Operators who are using these new axles call them the final answer to heavy-duty final drive problems. For all that's modern and best in design and performance, specify Timken S or U Series Axles under the next heavy-duty trucks you buy.



TIMKEN

THE TIMKEN-DETROIT AXLE CO., DETROIT 32, MICH.
WISCONSIN AXLE DIVISION • OSHKOSH, WIS.
TIMKEN AXLE BRAKE DIVISION • DETROIT 32, MICH.



* FINAL DRIVES INTERCHANGEABLE IN THE SAME AXLE HOUSING



Modern baking Company fleet finds relief from sludge trouble



"After operating this fleet on Stanolube HD, overhaul periods were reduced, clogging of screens disappeared, engines stayed clean with positively no ring sticking." That's the engineer's final report after working with the fleet maintenance men of the Heiss Baking Company to clear up sludge and varnish trouble that had plagued this fleet for some time.

Along with changing to Stanolube HD this fleet also

adopted Streamlined P. M.—Standard Oil's simplified preventive maintenance plan. As was proved in this fleet, Stanolube HD and Streamlined P. M. are an unbeatable combination for reducing fleet maintenance. Your Standard Oil Automotive Engineer can tell you about both. Write Standard Oil Company (Indiana), 910 South Michigan Avenue, Chicago 80, Illinois, for the Engineer nearest you.





AUTO-LIE OF TRUCKS, TRACTORS, BUSES



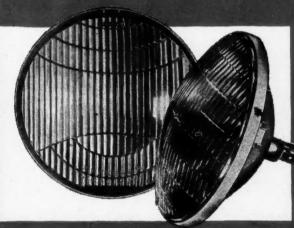
HEAVY DUTY BATTERIES

Switch to Auto-Lite to help get top economy and the best performance from trucks, tractors and buses. Auto-Lite spark plugs are ignition engineered. Auto-Lite heavy duty batteries, made with fibre-glass, outlast ordinary batteries without this feature. Auto-Lite offers such advancements as battery cable with anti-corrode

terminals and famous Steelductor spark plug wire. Auto-Lite sealed beam units continue to function even when the lens is broken. Switch to Auto-Lite; "money cannot hav better products."

THE ELECTRIC AUTO-LITE COMPANY TORONTO 1, ONTARIO TOLEDO 1, ONTARIO





LIGHTS and LENSES



WIRE and CABLE

THE ORIGINAL EQUIPMENT LINE



FATURE ATTRACTIONS

with YORK-HOOVER ALL-METAL BODIES



Lightweight all-metal sliding doors are conveniently located, easy to operate, and automatically self-cleaning.

Improved windshield construction provides wider vision which assures maximum safety.





All-metal body interior facilitates maximum cleanliness and eliminates odor absorption.

Convenient location of comfortable seat enables operator to get in and out of truck with minimum amount of effort.



Be "BODY-WISE"! Write for complete information NOW.



BODY DIVISION CORPORATION



YORK, PENNSYLVANIA

LIGHTNING SERVICE FOR YOU

THROUGH GENERAL'S DISTRIBUTION SYSTEM



S. O. S. FIRE GUARD Vaporizing Liquid Extinguisher— America's great utility fire fighter. Effective on oil, electrical, grease, and gasoline fires. Will not freeze at 48° below zero. 1 qt. and 1½ qt. sizes.



CD-SNO FOG Carbon Dioxide Extinguisher. Kills fire instantly, yet cannot damage equipment, premises, or personnel Effective on electrical, oil, and gasoline fires. Sizes 2 to 100 lbs.



RED STAR Soda Acid Extinguisher. Releases strong stream of water under chemical pressure. Immediately effective on wood, paper, or textile fires.



THE GENERAL DETROIT CORP.

IF IT'S



IT'S DEPENDABLE

Manufacturers of Fire Extingulabors.

Motor Fire Apparatus and Allied Equipment

2270 E. JEFFERSON • DETROIT 7, MICHIGAN
NEW YORK • PHILADELPHIA • CHICAGO • DALLAS

West Coast Affiliate: The General Pacific Corp.
Los Angeles San Francisco Seattle

Distributors in Principal.Cities



FLOAFOME Foam Type Extinguisher. Smothers fire under a blanket of foam. 2½ gallon size produces 22 gallons of foam. For use on wood, paper, textile, oil, and gasoline fires.



wood, paper, or textile fires. Range is 45 feet. Non-freeze charge protects at 48° below zero. ALASKAN — 2½ gallons; PRO-TECTOR—5 gallons.



Pacemaker

PACEMAKER Knapsack Type Extinguisher. Can be strapped on back and operated from that position. Telescopic pump nozzle leaves both hands free for fighting fire. Ideal for outdoor fires.

ALASKAN and PRO-

TECTOR Pump Type

Extinguishers.

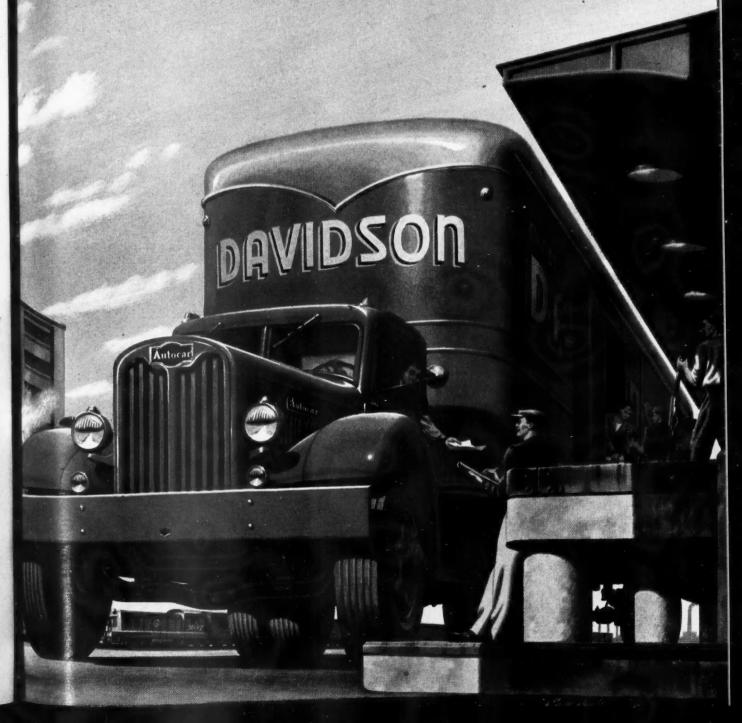


ELECTULE

All over America, heavy-duty Autocar Trucks are moving big payloads big distances . . . rapidly, dependably, economically. These great trucks cost more because they're worth more. Autocars operate profitably without pinching pennies because Autocar engineers build them without penny-pinching.

AUTOCAR ENGINEERED FOR

Manufactured in Ardmore, Pa. . Factory Branches and Distributors from Coast to Coast



Plenty of reasons, why this TRUCKTORED tank truck is more profitable than two 4-wheelers



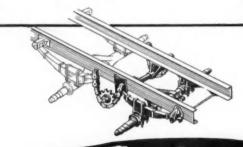
- Permanent alignment of wheels.
- Perfect tracking . . . an important feature.
- Six point body support for greater stability and less fatigue.
- Husky yoke and torque arm minimize braking strains and road shocks.
- Minimum maintenance . . . new, simple design.
- Greater safety.

GENERAL RULE. If you haul enough (Oil, steel, bricks, ice cream or what not) between any two points to justify two four-wheel trucks, you can haul it cheaper and with greater safety with one Trucktor Third Axle Conversion.

SPECIFIC REASONS

- 1 A Trucktored truck of any weight class hauls twice as much payload as the original truck.
- 2 There is considerably less dead weight.
- 3 Fuel costs are lower per ton hauled.
- **4** Lower tire costs due to cushioned ride, dampened road shocks, fewer tires of smaller size.
- 5 Lower original vehicle cost.
- **6** Lower maintenance cost . . . only one unit to service instead of two.
- 7 Only one driver needed.
- 8 Reduced operating and loading time.
- **9** Lower insurance rates by 25% . . . because third-axle jobs are the safest vehicles on the road.

We'll be glad to explain Trucktor savings to you. Write.



THE TRUCKTOR

CORPORATION . NEWARK 5, N. J.

THIRD AXLES

MADE BY THE MAKERS OF TRUCKTOR TRAILER AXLES

LOCK the LOAD for Safety's Sake

SPOTLIGHTS
the LIFT-SPOT TOO!

This exclusive built-in light shoots a beam of light under the car for quick, safe positioning. Another "More for your Money" Blackhawk feature.

KING OF THE SHOP

Blackhawk's Safety Handle Lock means greater protection for operator and load. Banishes danger of accidental lowering. This and an array of other outstanding safety and performance features have won the Blackhawk S-4 the title of "World's leading all-purpose Hydraulic Service Jack". When you need a jack — buy the best — buy a Blackhawk from your Blackhawk Jobber — it's worth waiting for!

A Product of BLACKHAWK MFG. CO., Dept. J11106, Milwaukee 1, Wis.

BLACKHAWK

Grey-Rock
BALANCED BRAKES
mean to
fleet operators

SMOOTHER SAFER STOPS

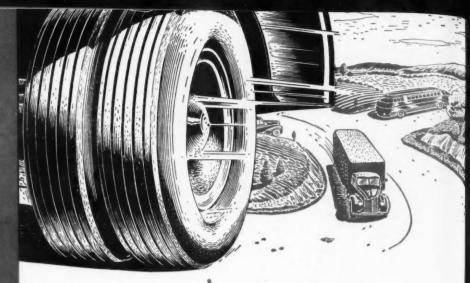
DRIVER COMFORT AND SATISFACTION

MORE TIME ON THE ROAD

FASTER SCHEDULES

LONGER LINING AND DRUM LIFE

LOWER MAINTENANCE COSTS



✓ SMOOTHER, SAFER STOPS

TODAY'S THICKER, TOUGHER TRAFFIC means more work for brakes. And the more often brakes are applied, the smoother they must function for comfort . . . safety . . . economy.

That's a big reason why Grey-Rock Balanced Linings and Blocks mean so much to fleet operators!

Developed out of field experience on hundreds of thousands of trucks and buses, Grey-Rock linings and blocks are balanced in correct combinations so that when brakes are applied you *stop!*—smoother, safer stops that only Grey-Rock balanced linings give you.

See your Grey-Rock jobber for *balanced* linings and blocks, AND Grey-Rock service methods to National Safety Council standards. Your Grey-Rock jobber has the right combination for the job . . . ready to use.

For unusual conditions, we will make a special on-the-spot analysis and recommendations.

Don't risk that one bad stop that might cost you a vehicle or a driver. Get the *smoother*, *safer stops* that only Grey-Rock can give! UNITED STATES ASBESTOS DIVISION of Raybestos-Manhattan, Inc., MANHEIM, PA.

TO MAKE 'EM LAST, PUT QUALITY FIRST



UNITED STATES ASBESTOS DIVISION of Raybestos-Manhattan, Inc. Manheim, Pa.





T

thi

eng

octa

for sion desi

Ост



What's brewing

IN THE WAY OF ENGINES AND FUELS?

THERE IS NO SECRET formula being cooked up which will let a ten-ton truck travel cross-country on a thimbleful of snake oil. Nor is there anything magic, mystic or mysterious about the future of truck and bus engine power.

What has been, will be. Just as improvements in gasoline quality in the years before the war made possible the development of higher-compression engines, so future increases in gasoline antiknock value will make possible the design of engines of even greater power and efficiency.

Gasoline quality, retarded during the war and still under restrictions, is bound to resume its normal upward course when restrictions are removed. It is reliably estimated that the regular gasoline of 1950 will have an average octane number of 80, and that the average octane number of premium fuels will be about 86.*

This gasoline offers engine builders new opportunities for increasing engine power. It permits higher compression ratios than those currently in use. It allows the design of engines giving greater power output per cubic inch displacement. It may well lead to the use of supercharging in engines for commercial vehicles. In any

event, it will mean that the truck and bus engines of tomorrow will be able to maintain faster schedules with lower operating costs.

Such engines, designed to take advantage of the extra power available in improved gasoline, are already past the drawing board stage. Automotive and petroleum engineers are working side by side in ironing out the problems involved in their design and construction. And Ethylresearch engineers are cooperating with both groups in every way possible—helping fit fuels to engines and engines to fuels so that greatest power and economy will be realized in actual service on the road.

ETHYL CORPORATION

Chrysler Building New York City



MANUFACTURER OF ANTIKNOCK FLUID USED BY OIL COMPANIES TO IMPROVE GASOLINE

Service unote this

NEARLY 1/2 THE VANS MADE IN THE FIRST SIX MONTHS OF '46 WERE TRAILMOBILES

From the Gulf to New England—from the green Atlantic to the blue Pacific, trailer operators are talking Trailmobile, and the figures for the first six months of '46 show that the trend is to Trailmobile.

And why not? Everywhere you'll hear owners singing the praises of this great new trailer—the kind they hoped to get in 1949.

Sure, we're thumping our chests a bit but only because you recognize that this many-million dollar beauty—born on the boards of forward-thinking designers and built in 6 great plants across the U.S. and Canada—is giving service with a capital "S."

Yes, indeed, service wrote this story of standout trailer success. It begins with men and management—farseeing men who devoted money, brains, modern tools, equipment and facilities to create an entirely new concept of trailer performance.

Electronic stress-measurement helped us build into this tough Trailmobile dozens of major structural improvements which strip dead weight from sides, frame and under-carriage. And practical engineering skill made possible the new simplified tandem with only 2 points of lubrication.

The Trend

success story



Mister, we're talking about a new era trailer—now! It's light—and the easiest pulling ever—yet safe, maneuverable and packed full of extra strength and brawn just where it is most needed.

Yet, in reality, Trailmobile is the proud product of people—people at desks, drawing boards and long conveyor lines—alert, sincere and friendly people like the ones you'll find in 71 Trailmobile Service Centers,

71 Customer Service Centers

All the people of Trailmobile know that leadership is a challenge and responsibility. They are ready to prove with Service why the trend to Trailmobile means more economical hauling.

THE TRAILMOBILE COMPANY
Cincinnati 9, Ohio

is to TRAILMOBILE

OCTOBER, 1946

Use postage-paid card inserted at page 59 for free information on advertised products

23



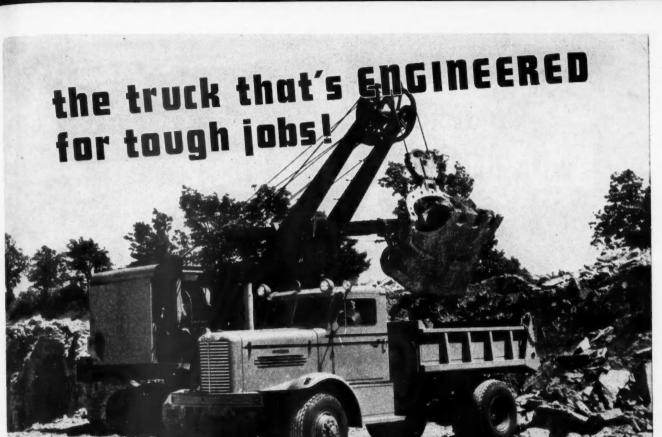
AIRTEX AUTOMOTIVE DIVISION

CHEFFORD MASTER MANUFACTURING CO., INC.

FAIRFIELD, ILL.



"Your profits climb with the AIRTEX Line"



OSHKOSH "has what it takes" for tough jobs. For nearly thirty years Oshkosh engineers have specialized in improvements for one truck only - 4-WHEEL DRIVE. That is why through the years it has continued to be Number 1 equipment for thousands of contractors as well as state, county and town highway departments - wherever efficiency and economy are important considerations. Today's OSHKOSH equipment is still further advanced through five years of war-tested engineering improvements.

Service Stations located at convenient points throughout the U.S.A.

Write for descriptive literature.

OSHKOSH MOTOR TRUCK INC. OSHKOSH, WISCONSIN

OSHKOSH WHEEL DRIVE TRUCKS



The Message that goes down in Black!

"Checking in on time!" That's the message that often means the difference between a black and red entry on the P & L sheets. And, naturally, that's why so many fleet operators from Coast to Coast insist on dependable Kellys.

The reason for this preference is that tough new Kellys incorporate the latest improvements in shape, design, materials—more rayon cords to the inch... extra rubber between plies ... a new design that compacts the rubber instead of stretching it ... the famous Armorubber tread that's actually tougher than *steel*.

And most important of all, 52 years of experience in designing and building better tires assures truckers that the Kellys they buy are products of extra skill, extra care through every step of the manufacturing process.

THE KELLY-SPRINGFIELD TIRE CO. Cumberland, Maryland





Fleet Records show "KELLYS ARE TOUGH"

DEPENDABLE FOR 52 YEARS!

BUILT TO LAST

... a long, long time



WILLARD BATTERIES—Automobile Truck and Bus • Radio • Motorcycle Tractor • Aircraft • Marine • Diesel Stationary — Sold and serviced by Willard Dealers everywhere.

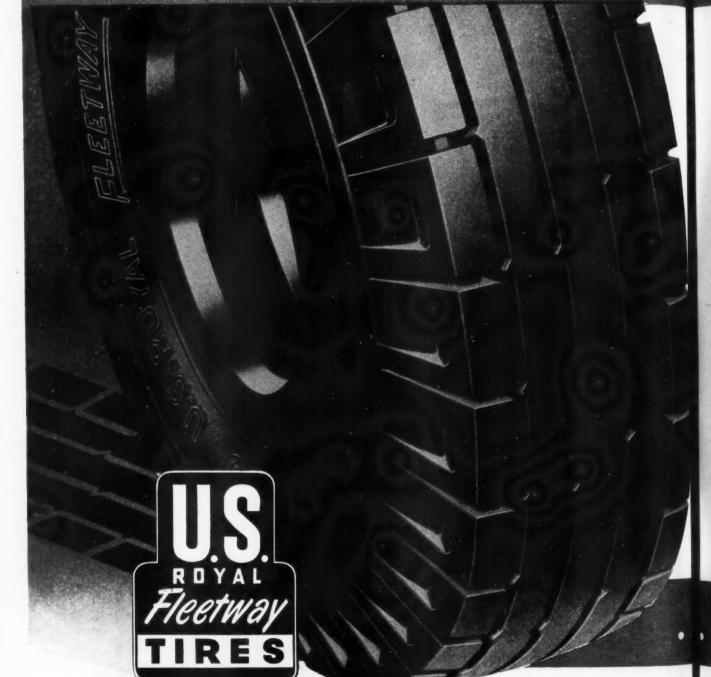
COMMERCIAL AND DIESEL BATTERIES A STATEMENT OF THE COMMERCIAL AND DIESEL BATTERIES A STATEMENT OF THE COMMERCIAL AND DIESEL BATTERIES

Dependability · Performance · Long Life

WILLARD STORAGE BATTERY CO. . CLEVELAND - LOS ANGELES - DALLAS - TOTONTO

SERVING YOU THROUGH SCIENCE

MORE MORE
QUIALITY * STRENGTH





UNITED STATES

MORE MORE
RECAPS * MILES

with every

U.S. ROYAL

Fleetway

MORE QUALITY—because "U.S." controls every step in making the U.S. Royal Fleetway—from raw materials to finished product. And "U.S." has always been famous for quality—quality that lasts and lasts.

MORE STRENGTH—U. S. Royal Fleetways are built tough—every cord, every ply, every ounce of rubber is so strong it resists wear—adds extra miles—reduces costly delays.

MORE RECAPS — The sturdy, rugged carcass of each U.S. Royal Fleetway can be recapped over and over again. And with USCAP—the exclusive "U.S." controlled system of recapping—you get better recaps.

MORE MILES — Extra miles — at less cost per mile—are built into U.S. Royal Fleetways. And U.S. Fleet Service reduces costs per mile even more!

See Your U.S. Tire Distributor Now!

RUBBER COMPANY

1230 AVENUE OF THE AMERICAS . ROCKEFELLER CENTER . NEW YORK 20, N. Y.

MANLEY

Automotive Service Equipment

STANDARD PRESSES

25-TON

40-TON

60-TON

80-TON



TRESTLES

7-TON

5-TON 2-TON

MHP-60 MOVABLE HEAD PRESS

While the quality of Manley Automotive Service Equipment is at an all-time high due to war production experience, the quantity available does not meet current demands. Your Manley distributor may not always be able to supply you with what you want when you want it. He's trying to serve you-just as we are trying to supply him. We suggest that you place your order now for earliest possible delivery of needed equipment.



York, Pa. • Chicago • New York • Portland • San Francisco • Bridgeport, Conn.

MANLEY MANUFACTURING DIVISION AMERICAN CHAIN & CABLE

In Business for Your Safety

30

You able is be The

bilit

FOR Fact

OCTO



is built in, from blueprints to finished products. There is one sure way to protect that reliability and durability,—insist upon AC pumps and parts.

FOR REPLACEMENT - install new AC Fuel Pumps or Authorized Factory Rebuilt AC Fuel Pumps.

FOR REPAIRS—use AC Diaphragm or Parts Kits.

QUALITY FEATURES

- Careful control of pressure and flow assuring correct fuel
- Accurate hardening, precision machining of parts essential to long life.
- Accurate control of spring tensions and temper.
- High, and controlled, pin hardness.
- 4-layer patented-impregnation diaphragms of special airplane cloth.
- Carefully finished rocker arm pads, located to center on cam.
- Split-hair rocker arm clearance and control of pad hardness.
- Uniform pull rod hardness at pin holes.

SEND FOR AC SHOP MANUA

- | How to Service Spark Plugs | HOW TO SERVICE FUEL PUMPS | How to Service Spark Plug Cleaner | How to Service Air Cleaners | How to Service Oil Filters | How to Service Speedometers |

FIRM STREET ADDRESS. STATE

ALL WHEEL DRIVE





'Moves Peak Pay Loads at Rock Bottom Cost"



The true measure of a truck's value is its ability to transport maximum payloads-where you want them, when you want them-at minimum cost. Unless your trucks perform all of these functions, efficiently, reliably, they are not giving you full value for your money.

Marmon-Herrington All-Wheel-Drive Trucks do give you your full dollar's worth-because they never let you down. All-Wheel-Drive power and traction-front wheels pulling, rear wheels pushing-guarantee that Marmon-Herringtons will get you there and back-on time . . . regardless of weather or terrain-on the highway or off.

Throughout, Marmon-Herrington All-Wheel-Drive Trucks are built in proportion to their great power and traction. Frames, axles, springs, transmissions—they're all built super-strong to take peak payloads-without a whimper . . . and do it for years and years and years.

Yes, Marmon-Herrington All-Wheel-Drive Trucks are built big for big jobs. For a convincing demonstration that these great trucks live up to their reputation-both the Heavy-Duty models and All-Wheel-Drive converted Fords—see your nearest Marmon-Herrington dealer, or write for illustrated literature.

MARMON-HERRINGTON COMPANY, INC. • INDIANAPOLIS 7, INDIANA

MARMON-HERRINGTON ALL-WHEEL-DRIVE

COMMERCIAL CAR JOURNAL

with which is combined Operation & Maintenance
Reg. U. S. Pat. Off. Published monthly Member C.C.A.
Acceptance under the Act of June 5, 1934, authorized December 18, 1934

Vol LXXII

Philadelphia, October, 1946

No.

JULIAN CHASE, Vice-Pres. and Directing Editor
GEORGE T. HOOK, Editor
A. W. GREENE, Managing Editor
CHARLES B. RAWSON, Associate Editor
M. K. SIMKINS, Technical Editor
JOHN C. HILDRETH, JR., Research Editor
JOSEPH GESCHELIN, Detroit Technical Editor
LEONARD WESTRATE, Detroit News Editor
MARCUS AINSWORTH, Statistician
HOWARD KOHLBRENNER, Art Director
L. W. MOFFETT, EUGENE J. HARDY, KARL RANNELLS
Washington News Editors

EDITORIAL CONTENTS

Copyright 1946 by Chilton Company (Inc.)

CCJ Recder Digest	30
FEATURE ARTICLES	
Code-Board Dispatching Pushes Payloads	38
Mistletoe Maintenance Men Make Ideas Cut Costs	42
Road Call Book Calls Turn on Failures	45
Fleet Builds Sturdy, Low-Cost Insulated Bodies	46
Causes and Cures of Excessive Oil Consumption	51
Engine Break-In Stand Cuts Breakdowns	55
Common Carrier's Uncommon Terminal and Shop	62
Truck Accident Causes Suggests Design Remedies White Super Power Engines Feature Major Improve-	66
ments	70
New Wagner Brake Features Self Adjustment	72
DEPARTMENTS	
Editorials	35
Shop and Salvage Hints	48
Laugh It Off	50

 Shop and Salvage Hints
 48

 Laugh It Off
 50

 CCJ Custorn Body Series
 56

 Free Publications
 58

 New Products
 59

 Ears to the Ground
 61

 Truck, Trailer Production Statistics
 69

 CCJ Quiz
 78

 Truck Registrations
 80

 Washington Runaround
 82

 Detroit Dispatch
 88

 Truck Specifications
 93

 CCJ Newcast
 106

G. C. Buzby, President and Manager, Automotive Division E. W. Hevner, Cir. Mgr. E. H. Miller, Adv. Mgr.

REGIONAL BUSINESS MANAGERS
RUSSELL W. CASE, JR., Philadelphia
A. R. ECKEL, New York City
E. E. ELDER, Detroit
JOHN C. HILDRETH, Cleveland
F. O. KIRKPATRICK. Chicago
C. H. WOOLEY, San Francisco
AUGUST HAURIN, JR., LOS Angeles

OFFICES
Philadelphia 39, Pa.—Chestnut & 56th Sts., Phone Sherwood 7-1424
New York 17, N. Y.—100 E. 42nd St., Phone Murray Hill 5-8600
Chicago I., III.—Rm. 916 London Guar. & Accident Bldg., Ph. Franklin 4248
Detroit 2, Mich.—1015 Stephenson Bldg., Phone Madison 2090
Cleveland 14, Ohio—1030 Guardian Bldg., Phone Madison 2090
Cleveland 14, Ohio—1030 Hatlonal Press Bldg., Phone District 8110
San Francisco 5, Cal.—805 Market St., Rm. 608, Phone Sutter 4951
Los Angeles 1, Calif.—6000 Miramonte Blvd., Phone Lafayette 5525
SUBSCRIPTION RATES: United States and United States Possessions and all Latin-American countries—\$5.00 per year. Canada and Foreign—\$10.00 per year. Single copies—50 cents. April issue, \$1.00.

Owned and Published by
CHILTON COMPANY (INC.)

Executive Offices Chestnut and 56th Streets, Philadelphia 39, Pa., U. S. A.

Officers and Directors
Jos. S. HILDRETH, President

Vice-Presidents

EVERIT B. TERHUNE J. H. VAN DEVENTER C. S. BAUR
P. M. FAHRENDORF
WILLIAM A. BARBER, Treasurer
THOMAS L. KANE G. C. BUZBY
CHARLES J. HEALE

Vice-Presidents
JULIAN CHASE
JULIAN CHASE
HARRY V. DUFFY

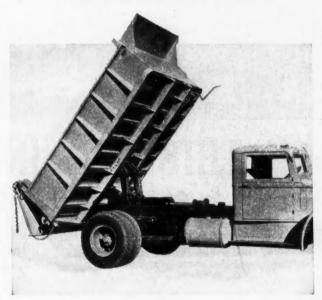
WILLIAM H. VALLAR, Asst. Treas.

PAUL WOOTON, Washington Member of the Editorial Board

How Much Payload?

Truck men, be sure the dump unit you order is big enough for the job to be done. Call your St.Paul Distributor and give him the facts in full. Tell him frankly what your loading practices are . . . how high you crown the loads. Remember that he's a dump unit specialist and follow his recommendation! It will pay you in the end!

Model 95 St.Paul Heavy Duty Hoist with Type 654 Heavy Duty 8 and 10 cu. yd. Body.



DEALERS AND SALESMEN:

New St.Paul Hoist Payload rating chart and table of weights of materials sent free upon request. Write us on your company letterhead.

ST.PAUL HYDRAULIC HOIST COMPANY

2207 University Avenue S. E. MINNEAPOLIS 14, MINNESOTA



THIS NEW INTERNATIONAL GETS THERE FASTER WITH MORE

ere's new cruising speed for American truck transport—new highway speed and new maintained speed over the hillsmaintained speed that earns greater profit per ton mile.

It's the new International KR-12, a heavy-duty highway truck-tractor driven by a larger, more powerful, war-proved engine-586 cubic-inch piston displacement.

It delivers new standards of maintained speed in hilly country because its high ratio of horsepower to gross weight makes possible almost constant use of high speed gears. Nor does engine torque drop off suddenly to cut road speed. Instead, 450 pounds-feet of torque are maintained from 900 to 1600 engine revolutions per minute.

It is equipped with special heavy-duty axles and transmissions to handle its added power.

It operates with almost passenger car ease, despite its 28,500 pound gross vehicle weight rating.

This speed-merchant of the hills and highways is the latest addition to the complete International line-everything for highway and off-highway work from half-ton pickups to offhighway haulers with gross vehicle weight ratings up to 45 tons.

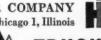
The new KR-12 represents more than 40 years' truck manufacturing experience. It shares this outstanding International record-more heavy-duty International Trucks purchased for commerce and industry in the last 15 years than any other make.

It is backed by the truck industry's outstanding service facilities - service supplied by International Truck Dealers everywhere and by a network of International Branches that form the nation's largest company-owned truck-service organ-

It's an International Truck, this KR-12, packed with all the name, International, means, and with maintained hill and highway speed that cuts travel time and steps up operating profits.

Motor Truck Division

INTERNATIONAL HARVESTER COMPANY 180 North Michigan Avenue Chicago 1, Illinois





Tune in "Harvest of Stars" every Sunday, NBC Network. See newspapers for



By GEORGE T. HOOK, Editor

The New York Strike . . . Public Relations Profit . . . The Safety Stake . . . The Jubilee

THE strike of truck drivers in New York City certainly classifies as a major economic catastrophe but, unlike the proverbial ill wind, it should blow the entire country to some good. It should become the classic practical example of the importance of motor trucks.

The strike had not been on very long when the railroads acknowledged the effect on them by embargoing freight destined for New York City. This, together with the picket lines that stopped outside trucks from entering the city, made the strike felt in countless other communities that supply the metropolis with foodstuffs, raw materials and finished products.

The newspapers, running short of newsprint which could not be moved from warehouses, eliminated advertising and held themselves down to the size of small-town sheets.

Housewives raided grocery stores, which had to close because they were unable to replenish stocks.

Many manufacturers closed down because they could not get raw materials and semi-finished goods.

Thousands were thrown out of employment.

All this happened when the strike was less than two weeks' old. Someone estimated that the economic loss ran to \$40,000,000. It requires no great imagination to visualize the chaos into which the city would have been thrown if the strike of all drivers had lasted a month.

What happened in the metropolis can happen in any city or town. The motor truck is one of the important cogs in the machinery that makes up our American way of life. When that cog stops

functioning the effect on commerce and industry is immediate and the longer the cog remains idle the more costly and painful the effect.

*

As the classic example of the importance of motor trucks, the New York experience should come in handy as a reminder whenever national and state legislators and local councilmen are inclined to impose restrictions and other burdens without sufficient consideration of economic consequences.

Public Relations Profit

So far as truck transportation public relations are concerned the New York strike should convince all but the incurably biased that their daily lives are affected by trucks. The public opinion pool findings published in last month's issue, showed that 25 per cent said that if trucks stopped running for a month "it wouldn't affect them at all." Another 2 per cent "had no opinion." If these 27 per cent read the newspapers or listen to the radio, and are not biased beyond hope of redemption, they must be persuaded now that a stoppage of trucks is certain to affect them.

Forty million dollars is a high price to pay for this persuasion, but at least the general public paid most of it. One group of truck operators is suing a union for \$10,000,000. Presumably this represents loss of revenue, so this amount may be put down as the trucking industry's contribution to improved public relations.

The Safety Stake

THE other day we heard the safety director of a large national fleet say that "46 per cent of the accidents in which his trucks were involved were caused by the other driver." This was based on 55 million miles of driving. All accidents were reviewed by kangaroo courts.

This is a very convincing statistic, proof that all fleets have a stake in the safety education of all other drivers. Many fleets are safety conscious to the extent of having a "program" for their own establishments. But few fleets actively participate in the promotion of safety plans which have as their object the education of the myriad one-truck driver-owners and passenger car drivers.

The statistic cited above is evidence that fleetmen would be doing themselves a good turn if they became more interested in highway safety education on state and local levels. The large fleets with safety directors are doing this very thing. Smaller fleets can make an equally important contribution to safety education by supporting the activities of civic groups which concern themselves with the problem, and by initiating such activities where necessary. State truck associations have this same responsibility to themselves and to their members, and the members in turn owe their associations the responsibility of active in-

Safety education will pay off in millions—of dollars, and thousands—of lives.

The Golden Jubilee

IF a Motor Truck Golden Jubilee is celebrated in 1948 or at any other time it will have to be sparked by truck user groups. The Jubilee came up for

(TURN TO PAGE 69, PLEASE)

.

e

t

TT READER DIGEST





To give busy readers basic facts quickly and simply, CCJ editors have condensed, on

Maintenance Men Make Ideas Cut Costs



by F. R. WARD, Superintendent of Equipment, Mistletoe Express Co.

THE fact that we have several units that have passed the million-mile mark and still deliver their cargoes at no increase in cost is some indication of the success of our program. Other indications: 100,000 miles on a set of valves and rings; sleeves run as much as 400,000 miles.

The program is not static. It is being continually improved. A summer tire contest, for example, brought us the lowest tire cost in our history.

Our PM program starts with the driver. He has comfortable seats with covers, heaters and defrosters, two complete lighting systems, two fuel pumps. This promotes contentment and confidence.

Next, we offer an incentive to our drivers to drive their trucks economically.

Another thing that helps our program is the policy of having conferences with other department heads and management.

Our PM program really starts when the truck comes in at the front door. It stops where it is gassed and cab interior cleaned and blown out with air.

Here are some of the jobs and checks made daily along the line: All trucks are washed and greased daily. Ignition points, brakes and brake fluid, and the steering system are checked every day.

Some weekly jobs: Spark plugs are cleaned and points reset; tappets adjusted—for doing this I have devised a time light shown at Fig. 5. We also run upper lubricant through the intake manifold.

We have make a change, shown in Fig. 4, on all overhead jobs to pump clean oil out of the filter back into the engine through the overhead valve assembly. This tends to keep all sludge washed down, insures better oiling of the valves and gives a slight increase in pressure. See Page 42.



Road Call Book Calls Turn on Failures

by W. J. THOMPSON, Fleet Superintendent, Carnation Co.

OAD failures are a thorn in the side of every fleet operator. But when you run 375 trucks, averaging 225,000 miles monthly, the thorn can soon become a spike. And the size of the spike in our side used to be 80 to 85 road calls a month. Now, however, the average is down to 50 to 55. The "Road Call Book" was the answer.

In use for six years, the book has served well in the attempt to control costly road breakdowns and service calls. By keeping a separate record of all road calls, the spotlight is constantly kept on road failures and their causes quickly come to light for corrective action.

Kept near the telephone, the Road Call Book is always handy when a driver calls in to report a break-down or to request some service. Whoever takes the call gets all the data, gives it to the mechanic who notes time of departure, work done, time of completion, etc. Both the mechanic and driver sign the sheet.

At the end of every month, the fleet superintendent compiles the information. This puts the finger on the outstanding sources of trouble.

A second check of the monthly compilation determines the number of calls for individual trucks. When any truck shows an excessive number of calls during a month, it is pulled into the garage and the old fine tooth comb applied to root out the trouble.

Originally, the book was started to end constant arguments between drivers and mechanics as to time spent on a job. Of course, the value of the book has broadened considerably, but the original purpose is still served. See Page 45.



Code-Board Pushes Payloads



by H. W. NIEMAN, Silver Fleet Motor Express, Inc., Louisville

THIS article is the first of a new series comprising a new CCJ monthly feature and entitled "A CCJ FLEET STUDY." The object of this series is to provide readers with complete studies of leading fleet operations in various vocational groups. The first series will cover the Silver Fleet Motor Express, Inc., Louisville, Ky. This article is the first of seven in the series and describes Silver Fleet's dispatching methods.

"The dispatching system in use by Silver Fleet," says the author, "gives the transportation department complete 24-hr. knowledge of the whereabouts of each item of equipment throughout the system.

"It starts with the dispatch board. The one in Louisville, Fig. 1, is the master board. Each terminal maintains a smaller one to account for its own dispatches.

"Essentially, it is a large blackboard divided into columns and cross-lined. Each major dispatching terminal is assigned a place on the board. Tractor and trailer numbers are painted on 2x4-in. metal tags. A tractor tag and trailer tag, end to end, indicate a hook-up.

"We take an imaginary trip: Dispatcher at Birmingham dispatched tractor 624 coupled to trailer 3028 from Terminal No. 1 to Terminal No. 5. He wires Louisville thus: 624 3028 1900 1.5. That means that an Autocar tractor pulling a loaded 30-ft. trailer (first two digits of trailer number), left at 19:00 o'clock (7 p.m.), consigned from Birmingham to Chicago (1.5). Arrival time in

 Not all articles in this issue are digested these pages. Don't miss these features 	01
★ Engine Break-in Stand Cuts Breakdowns ★ CCJ Custom Body Series—Beer Body ★ White Engines Feature Improvements	5
TABLE OF CONTENTS, PAGE 33	

these pages, this month's leading articles

Louisville is known and, since this is the breaking point for the system, a driver and a tractor must be ready.

"On the Louisville board the dispatcher has hung under "Louisville" two tags, one numbered 624 and the other numbered 3028, and opposite them he has written with chalk 1-5. The tags are moved on the board in exactly the same way that the equipment is moved on the road . . . throughout the day and night, on a 24-hr. basis.

"The aim of having a visual operation on a board, is not only to expedite the movement of freight, but to help promote a balanced operation." See Page 38.



Causes, Cures of High Oil Consumption



by M. K. SIMKINS, Technical Editor, Commercial Car Journal

THIS is No. 2 in COMMERCIAL CAR JOURNAL'S new series of technical articles comprising the CCJ Fleet Shop Manual, inaugurated last month. The data are compiled to serve as a trouble shooting guide.

"Any mechanic can throw a new set of piston rings at an oilthirsty engine-and sometimes even effect a cure-but the experienced man knows that worn rings are only one potential trouble spot, and that a careful check of other units is in order while the engine is down for overhaul," says Simkins. "Several thousand miles between re-ring jobs can produce wear in other spots which can contribute just as much to high oil consumption as worn out piston rings. In fact, a total of 70 causes of high oil consumption in an engine have been listed on the following pages. The list contains both direct and contributing causes. Our immediate consideration will be given to direct causes. If any of these causes cannot be established, the mechanic should consult the check list for other possibilities." See Page 51.



Fleet Builds Low-Cost Insulated Bodies



by JACK KAY

REAUTY of the smart, sturdy truck bodies used by The Challenge Cream & Butter Assn. of Los Angeles is the result of 15 years' body making experience, with about 750 produced within that time.

Challenge turns out four styles of bodies. A 52-50-lb. refrigerated ice cream body is made for from \$300 to \$400 cheaper than a

comparable manufactured type. The 1940-lb. milk body and 1360-lb. butter body are each put together at a saving of from \$75 to \$100. An occasional stake body nets a saving of just a little less than the milk and butter bodies.

Several construction features have doubled the life of the Challenge bodies.

General construction procedure follows the standard pattern. Preparation of material, however, differs. All wood is given an overnight soaking in a wood preservative then painted when assembled.

Tongue-and-groove spruce is used in ice cream bodies. It is boiled for 3 min. in paraffin. The back side of all metal is painted to prevent rusting. The building routine: The insulation, cork, goes on the floor first. This is covered with copper, as shown in Fig. 4. The studs are then built right on to the box. Fiberglas is put in between the studs in a tight fit. Outside plywood and outside metal are then applied. The roof is finished last.

Challenge employs three full-time body men. They erect an ice cream body in from two and one-half to three weeks; a butter or milk body in two weeks, and a stake body in about one week.

Specifications, breakdown and cost of materials for the various models are supplied. See Page 46.



Carrier's Uncommon Terminal and Shop



by BART RAWSON, Associate Editor, Commercial Car Journal

A N unusually sound basic plan, plus infinite attention to important details, makes the new Boston terminal and shop of the St. Johnsbury Trucking Co. a truly outstanding venture.

The reader is invited on an imaginary inspection tour of: The parking area which features "black top" surfacing, concrete strips for trailer wheels and landing gear and Jennite treatment against oil and grease.

The loading dock, 165 ft. x 35 ft., with capacity of 1,000,000 lb.

The pick-up area, where small trucks are simultaneously loaded and serviced in a heated, enclosed area.

The repair shop which features everything from convenience outlets at 20-ft, intervals to a complete chassis dynamometer, and

A cavernous basement, approached by two ramps, which houses heavy parts, complete tire department, metal and wood working shops, lockers and office space for safety and personnel departments. See Page 62.



Truck Accident Causes Suggest Remedies

HERE were 1124 accidents in 1945 due to mechanical failures compared with 1083 for 1944. This is 10 per cent of the 11,296 accidents of all types reported to the Interstate Commerce Commission.

Brake defects, always the cause of more accidents than any other mechanical failure, increased both in number and per cent; tire failures continue to be the second most frequent cause of accidents. These two defects were involved in 41.6 per cent of all mechanical defect accidents in 1945. Five types of failures (brakes, tires, engines, steering and lights) are responsible for almost two-thirds of all the mechanical defect accidents reported.

The accompanying table lists a summary of mechanical defect accidents by number, casualty rates, and property damage per

accident by type of defect.

Twelve conclusions are drawn and recommendations are made to truck, parts and accessory manufacturers as well as to fleet operators as to how mechanical defect accidents may be reduced. See Page 66.

r,

e le

to

d

ce

n.

1

5.

er

ir

Code-Board Dispatching Pushes



KEEPING freight moving and maintaining constant contact with road equipment is a motor freight problem handled in al-

H. W. Nieman most as many ways as there are freight lines. We, at Silver Fleet Motor Express,

Inc., Louisville, Ky., have a system in use that contains many conveniences and short-cuts. For instance, the dispatcher can tell by glancing at the large master dispatch board, the length of a given trailer, the make of the tractor and where they are. Operating in eight states-Kentucky, Tennessee, Indiana, Illinois, Ohio, Alabama, Virginia and North Carolina, with headquarters at Louisville -it is apparent that equipment specifications have an important bearing on our operation.

We don't let the intricacies of dispatching freight get in the way of the primary reason for the existence of the company. All our work is planned toward ultimate movement of the most freight with the least equipment and at the lowest cost.

Terminals are coded by number instead of by name of the town. Tractors and trailers are assigned numbers for use in dispatching, servicing and general control but each number has an added significance to the dispatcher. He can tell from the number the make of a tractor and the length of a trailer.



Decoded this wire informs Chicago dispatcher that Louisville terminal has dispatched to Cincinnati tractor 608 hooked to trailer 3204 and tractor 607 with trailer 3214 at 19:00 o'clock. The article further explains these codes

Greenwich Mean Time, often referred to as the 24-hour clock, is used in all dispatch wires. This eliminates a.m. and p.m. designations and prevents errors and misunderstandings.

Telegraph dispatching is done on series-message basis throughout each day which results in a substan-

> tial cost saving over a charge-per-message basis.

The dispatching system in use by Silver Fleet gives the transportation department complete 24-hour knowledge of the whereabouts of each item of equipment throughout the system.

The Master Dispatch Board

IT STARTS with the dispatch board. The one in Louisville, Fig. 1, is the master board. Each terminal maintains a smaller one to account for its own dispatches.

Essentially, it is a large blackboard divided into columns and cross-lined. Each major dispatching terminal is assigned to a place on the board. Tractor numbers are painted on 2 x 4-in. metal tags, provided with two small holes by which they may be hung at any position on the board. Trailers are designated by similar tags; and a tractor tag and trailer tag, end-to-end, indicates a hook-up.

Beneath all terminal names on the board are columns designating the disposition of tractors and trailers. One column is for equipment in the



DIVIDED INTO 7 PARTS

This Article, No. 1—Dispatching
Maintenance Control
Tire Maintenance

5. Dynamometer Tune-ups
6. Engine Rebuilding

Payloads

shop, one column is used for spare equipment and other columns to denote equipment on the road or dispatched from one point to another.

It might be well to point out that a through load is only dispatched one time although it may go through several terminals. A load from Birmingham to Chicago will be dispatched out of Birmingham. It will break at Louisville and another driver will pull it into Chicago, but it is not necessary to do anything except check for arrival after it is dispatched from Birmingham and record the movement on the board.

How the System Works

TO EXPLAIN how the system works, we take an imaginary load on such a trip. Dispatcher at Birmingham dispatches tractor 624 coupled to trailer 3028 from Terminal No. 1 to Terminal No. 5. He wires Louisville thus:

624 3028 1900 1-5

nal

ınt

ard

ed.

rd.

2 x

WO

be

rd.

lar

iler

up.

the

the

ers.

the

MAL

That means that an Autocar tractor pulling a loaded 30-ft. trailer (first two digits of trailer number), left at 19:00 o'clock (7 p.m.), consigned from Birmingham to Chicago (1-5).

All 600 series tractors are Autocars. All 400 and 500 series are White. City pickups are in a 300 series and any 0 to 100 numbers means small cars and pickups. First two digits of a trailer number indicates length and helps prevent sending 32-ft. trailers into states where only 29-ft, trailers are allowed.

Arrival time in Louisville is known and, since this is the breaking point for the system, a driver and a tractor must be ready.

Driver is called two hours in advance of the time load is scheduled to arrive and leave.

On the Louisville board the dispatcher has hung under "Louisville" two tags, one numbered 624 and the other numbered 3028, and opposite them he has written with chalk 1-5.

(TURN TO NEXT PAGE, PLEASE)

524 3208 5 2708 5 520 3002 75 5 520 3002 75 5 520 3002 75 5 520 3003 75 5 2707 70 70 70 70 70 70 70 70 70 70 70 70	COLO TRATRAIL DUE DEST. HELD DNo. TRATRAIL DUE DE SONT CONTRATRAIL DUE DE SONT
534 3004 6526 50.18 531 750E	295A 7003 2702 2702 50.72

By glancing at this large master dispatch board, the dispatcher can tell length of a given trailer, the make of the tractor and where they are. Space even is provided for the shop records so that the system helps maintain PM schedules

24-hr. fleet movement visualized by placing wired code data and tags on dispatch boards in terminals. System expedites freight, promotes balanced operation, aids maintenance

by H. W. NIEMAN

Superintendent of Transportation, Silver Fleet Motor Express, Inc.

Code-Board Dispatching . . .

(Continued from Page 39)

Board Aids Maintenance

BESIDES all the units on the road he has a list of tags, each representing tractors and trailers. He can tell at a glance what equipment is in the shop because these tags will be hanging under the shop designation.

The tags are moved on the board in exactly the same way the equipment is moved on the road. Suppose No. 624 comes in and it is due for an oil drain, filter change. When it delivers its trailer, it has to report to shop for gasoline. The gas man has a board and before that unit is gassed and oiled he checks his board. There he finds that the transportation department has sent in a Dispatcher's Vehicle Call Order, which is an order calling the unit into the shop for an oil drain or maybe a B check.

In the meantime, another driver has been called, by seniority, in advance of his time by two hours. After he was called, the whereabouts of his tractor was ascertained. If it was in for a check, the board shows the tractor is in the shop. If in the shop, the dispatcher finds out when it will be out and if in time for the run for that driver. Under most all conditions drivers use the same tractor, although they have a number of free-lance drivers and freelance tractors.

It might happen that the tractor used by the driver about to be called was in the shop and could not be gotten out in time to meet the schedule. In this case, the dispatcher would call the next driver and his tractor according to the seniority. He also has to take into consideration the time the driver got in, amount of sleep he has had and whether he is available for call, according to I.C.C., company and union rules.

Under normal conditions tractor and driver would have each completed necessary preliminaries due before making another trip. Driver would have had the required amount of sleep and tractor would have completed its process through shop PM program and repair.

Driver Regulations

R ULES and regulations are all known quantities. It is understood throughout the system that terminal superintendents represent the transportation department and all drivers arriving or departing at terminals are under the jurisdiction of the terminal superintendent while they are there.

Should the imaginary load from Birmingham arrive at the Louisville terminal more than one hour late, then the terminal superintendent is required to turn in a Driver's Irregularity Report, Fig. 2. This goes directly to the superintendent of transportation, and the irregularity charged is checked on the list.



This report lists 33 possible violations from reported late to violation of company rule. This report is only half complete when filled out by the terminal superintendent, since he must allow the driver to write in his own explanation of the incident which prompted an irregularity report. Next the driver is interviewed. The result of the incident, as decided by the company, is made known to him and added to that driver's personnel record in the confidential files of the company.

Throughout the day and night, on a 24-hour basis, the cards representing tractors and cards representing trailers are moved about on the large board as the equipment completes schedules.

Promotes Balanced Operation

SO MUCH for the movement of equipment and responsibility of the driver, the aim of having a visual operation on a board is, not only to expedite the movement of freight, but to help promote a balanced operation.

As every experienced transportation man knows, it can be mighty easy to get all of your equipment over on one side of the system and then suddenly find out that you need it a thousand miles away. Consequently, the ideal operation is a fully balanced one—where there are always just enough tractors and trailers to move the amount of freight offered.

Forms for Permanent Record

I NASMUCH as the data on the blackboard does not provide us with a permanent record of freight movement, we use a form entitled Daily Dispatch Report, Fig. 3. Information on this sheet is wired to concerned terminals at time of leaving.

Besides a report recording the daily dispatches, a report called Inter-City Perfromance, Fig. 4, is gotten up each week. This report shows the number of trucks dispatched as compared to the budget number required for balanced movement. This report, when carefully analyzed, will give the management an accurate picture of the production obtained from their investment in highway equipment.

Fire F8fipnnf

A sample entry on this sheet shows that 94 trailers were moved from terminal 60 which is Louisville. The budget set up to insure the proper number of trailers being on hand for a normal movement of freight is 96. It took all the trailers provided for the normal load except two. The budget set up gave a mileage of 25,000, but since two of the trailers didn't go, there was a minus mileage of 237 miles. Two empty trailers had to be dispatched to pick up loads a distance of 144 miles. There was then 144 miles of deadhead operation. Payload on the 94 trailers amounted to 2,034,580, or 21.2 M-lb. average thousand pounds per trailer. Full load on budget is 23 per trailer and the final figure shows that the 94 trailers lacked only 1.8 M-lb. per truck of carrying full loads.

REPORT OF DRIVERS IRREGULARITIES TABLE OF DRIVERS TRANSCOLARITIES TABLE OF DRIVER TERRITIAL DATE 1. Recorded Jake (4 nour time allowed)

ALTE OF DRIVER	TERMINAL	DATE	
]. Reported late (1 hour time allowed)	DETAILS.		
2. Reported in intexicated condition			
5. Failed to report after called			
L. Unable to find			
Log sheet-Trip card differ			
o. Delayed forwarding log			
7. Traded truck without permission			
8. Failed to report accident			
9. Created disturbance			
O. Abused equipment			
1. Failed to follow instructions			
2. Signed in incorrectly			
5. Signed out incorrectly			
. Refused truck			
5. Failed to check cas card			
6. Arrived with broken governor seal			
7. Arrived with flat tire			
8. Arrived late (more than one hour)			
9. Drove too fast a schedule		Signature	
O. Loft waybills	DRIVERS EXF	LANATION:	
1. Pailed to punch clock at check station			
C. Failed to report repairs needed			
5. Failed to regard safety rule			
Railed to advise chance of cords			
5. insufficient rest			
5. Ran off route			
7. Violated 10 four rule			
8. Violated 60 hour rule			
9. Pailed to make pick-up or delivery		0	
2. Pailed to turn in collections			
1. Failed to turn in waybills			
Failed to turn in bill of lading			
3. Violated company rule			
		Simuture	

Fig. 2. Driver's Irregularity Report, $8\frac{1}{2} \times 11$ in., is used if truck arrives at destination over 1 hr. late, giving transportation superintendent means of schedule control, trouble correction

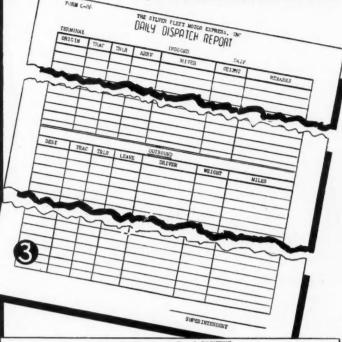


Fig. 3. Daily Dispatch form, $8\frac{1}{2}$ x 11 in, Data on this form are wired to concerned terminals to aid schedules

Fig. 4. Inter-City Performance Report, 8½ x 11 in., prepared weekly. This form shows the number of trucks dispatched as compared to the budget number required for balanced movement. Circle, in red ink on original form, indicates deadhead mileage

On this blank, which I sign, recommendations, remarks and corrections of the week's business are made. For example, if the dead-head figure is larger than normal, changes designed to reduce it are made immediately. As another example, loading per trailer may get lower than we like and changes designed to insure carrying of capacity loads will be recommended.

On the other hand too much crowding for loads may promote extra enthusiasm and overloads may start. These will be immediately cut back by the transportation department because overloads increase maintenance and tire costs.

So the goal is a full load — not under and not over.

Mileage is computed on a point-to-

INTER-CITY PERFORMANCE

wo.			LOAD	LOADED TRUCES DISPATCHED					PATCHED	LOADED		R TRAIL	ER .
	TERMINAL	ACTUAL	BUDGET	UNDER	MILES	BUDGET MXLES	OVER	шо.	MILES	VRHICLES	ACTUAL	BUDGET	OARE
1 5 10 15 20 335 10 15 50 51 55 59 60 65 70 75 80 85 90 95	Birmingham Chicage Chimbes, Ind. Segment LaFayette Marion, Ind. Elwood Furt Wayne Asheville Hurphy Control Columbas, Otto Columbas, Otto Chattanooga Kingsport Kancrylls Machwile Machwile	94	96	-2-	24,7/3	25,000	-287	@	(2,034,590	2/1	23.	-1.8
	TOTALS												

point basis rather than collection of varied speedometer readings. Drivers are allowed to go only on authorized routes between points. This simplifies things because the mileage from one point in the system to another will always be constant, whereas each collection of a speedometer reading will be different and will vary from truck to truck.

On this basis the transportation department figures the time for periodic checks and PM operations.

When the unit has made the required number of trips to total the miles at which it is to be checked, they send an order to the maintenance department to hold the unit. The maintenance department hangs the orders on the gas board and the vehicle is held the first time it comes in for gas.

In addition, each unit going out on the road has to pass through the maintenance department's safety lane, which operation will be covered in another article.

Mistletoe Maintenance Men Make



F. R. Ward

THE fact that we have several units that have passed the million - mile mark and still deliver their cargos at no increase in cost is some indication of the

success of our PM program.

Here are other indications:

Before the war we were able to get 94,000 miles out of a truck tire without recapping.

We have no governors on our trucks. We use tachograph equipment which gives us a graphic record on a paper disk and we ask our drivers to operate their vehicles at a maximum speed of 45 mph.

Use of these recorders and the cooperation of our drivers gave us an immediate increase in gasoline mileage of 1.6 per gal.

We get 100,000 miles on a set of valves and rings.

Sleeves run as much as 400,000 miles before replacement. We replace sleeves when the wear exceeds .008.

These are some of the highlights of a PM program that was begun 12 years ago and which has been molded into its present efficiency by a high state of cooperation between the maintenance department, the drivers, all the other department managers and the management of the company.

Contest Boosts Tire Life

THE program is not static. It is being continually improved. A summer tire contest last year, for example, brought us the lowest tire cost in the history of the company during a period when the tire situation was at its worst. It was held from July 1 to September 1 which is the torrid

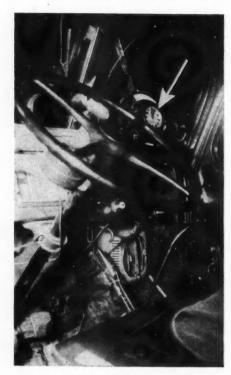


Fig. 1. Arrow points to tachograph which is installed directly in front of the driver so that it is easily read

Contests boost tire life, dual lighting and fuel systems cut road troubles, devices aid truck operation; conferences spur PM ideas

by F. R. WARD

Superintendent of Equipment, Mistletoe Express Co., Oklahoma City

period in Oklahoma and when tires take a beating from hot roads.

All drivers were in the contest which was made fair to all by having each man operate in blocks of one thousand miles. Ratings were posted for public view. Each driver who went by one day without a chargeable tire failure received a blue star and if he had a charageable failure he received a red star.

The basis of the contest was that if each driver personally attended to picking the nails and other foreign

Ideas Cut Costs

particles out of his tires each day, and checked the air pressure, that he was not likely to have a road failure. In fact, tire experts claim that if this is done that you will never have a road failure.

Each man advanced in blocks of one thousand miles in the contest with a cash reward for each thousand miles he operated without a tire failure. It was possible for a driver to win \$100 in the short time the contest was conducted. It was so successful that it will be continued in the future.

Driver Key Man in PM Program

() UR preventive maintenance pro-

gram starts with the driver. I cannot stress too highly the importance of selling the drivers on what you are trying to do, and why it should be done, and why the management wants it done. The right type of men behind the wheel soon realize that their own personal future is tied up in these things.

Drivers cannot be sold a PM program by preaching. Neither can their confidence be promoted by handing them a truck with a "There it is, drive it."

In the first place since our driver is the important cog in our preventive maintenance wheel, we try to give him what he needs and all the comforts possible.

We have comfortable seats in the cab. Seat covers are used that are cool in summer and warm in winter. Cabs are equipped with adequate heaters and defrosters.

Dual Lighting, Fuel Systems
THE driver has two complete lighting systems. One is fused and will go out if a fuse blows and the (TURN TO NEXT PAGE, PLEASE)

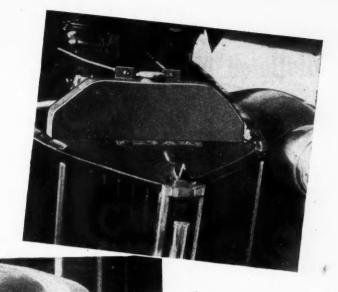


Fig. 2. A new section is added to radiator when larger engine is installed

Fig. 3. Air scoops cut in fore part of hood cool the extra section ——— of radiator

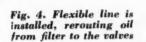
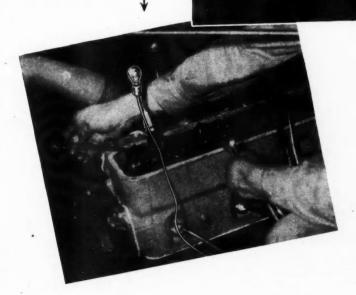


Fig. 5. Tappets are set with a home-made timing light. It shows when pistons are at top center



Mistletoe Maintenance Men...

(Continued from Page 43)

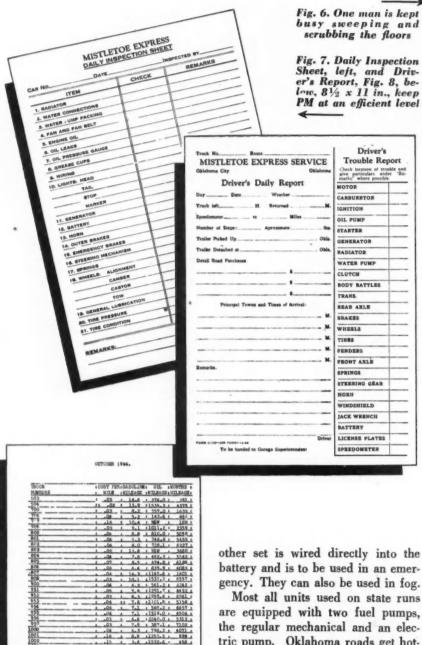


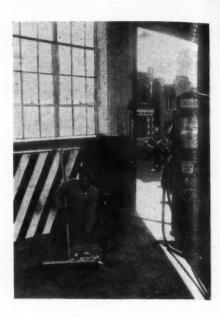
Fig. 9. This sheet is used to figure costs per mile, gasoline and oil mileages, month's mileages of each truck

MAIN DE MUCKS

other set is wired directly into the

Most all units used on state runs are equipped with two fuel pumps, the regular mechanical and an electric pump. Oklahoma roads get hotter than 110 deg. F. in the summer. When an engine starts to fade out due to vapor lock caused from heat the driver merely turns the switch on the electric pump. This promotes contentment and confidence in the ability of the equipment to make schedules.

Each unit is equipped with a tachograph which records the stops, trip mileage, the correct time, and



running speed. Here we also have consideration for the driver by mounting it above the dash about the center of the windshield, as shown by the arrow in Fig. 1, so that it is in full view instead of being hidden down under the dash. They are set to burn a dim red light between the speeds of 40 and 50 mph which is what we ask them to run. Besides that we mount the unit and change the angle to suit the drivers.

Next we offer an incentive to our drivers to drive their trucks economically, which means by the rules we impose, by furnishing them with a monthly cost sheet on the operation of their trucks.

This brings on friendly rivalry between drivers in a contest that involves their skill since many of our units are alike and a difference in mileage cost would show that something was radically wrong with the truck or that one driver was not getting what he should get out of his vehicle.

Unusual Conditions Checked

R ECENTLY one of our trucks had more tire trouble than usual. There was no apparent accounting for it being out of line with the other units traveling the same number of miles.

We have 325 agencies or express terminals in the state of Oklahoma. When we finished our investigation we found that the truck having the

(TURN TO PAGE 130, PLEASE)

OAD failures are a thorn in the side of every fleet operator. But when you run 375 trucks averaging 225,000 miles monthly, the thorn can soon become a spike. And the size of the spike in our side used to be 80 to 85 road calls a month. Now, however, the average is down to 50 to 55. The "Road Call Book" was the answer.

In use for six years, the book has served well in the attempt to control costly road breakdowns and service calls. By keeping a separate record of all road calls, the spotlight is constantly kept on road failures and their causes quickly come to light for corrective action.

Provides Time Loss Record

IN ADDITION to serving as a fine maintenance control over road breakdowns, it keeps a check on the time of drivers and mechanics involved in a call, and settles many of the constant driver-mechanic arguments about "Who wasted who's time."

Kept near the telephone, the "Road Call Book" is always handy when a driver calls in to report a breakdown or request some service. Whoever takes the call, puts down the following items of information: Truck number, route number, and date;

ROAD CALL	110	
Truck No. 19	No	
Routo No. 231	Date 3/2/	/2
	Date	194 0
LOCATION (address)		_
7/32 mel	rose 4	we
Near what intersection	00	
melrose &	da Br	eal
Mature of trouble		
motor	stalled	1
Taken by Harry	AM 10:30	2 AAI
Left Plant: Time 10:40	AM	PM
Arrived at trouble 11:05		
	AM	PA
Finished repairs //:30	Time	PM
Returned to plant 12:00	AM	PM
Used Truck No. 60	Miles Traveled	6
Speedometer Reading - Start 13	300	
Speedometer Roading - End /3	3/6	
Remarks Short in	ignition	
	0	
C.R. Long	D.D.A	10
Driver	Marhanic	11
0	recommend.	00

Road Call slip, 4x6 in., on which shop men note details of trouble calls. Data from these slips are compiled in a book and analyzed monthly to correct causes. System shows time-loss record

Road Call Book **Calls Turns on Failures**

Separate record of road failures puts the spotlight on troubles, helps correct causes. Monthly road calls drop from 80 to 50



by W. J. THOMPSON Fleet Superintendent, Carnation Co., Los Angeles, Cal.

location of the disabled vehicle; nearest intersection; nature of the trouble. The name of the individual taking the report and the time the report came in over the telephone appear

The mechanic is notified immediately and takes up the slip from that point. When the mechanic leaves the garage, he notes the time of his departure. Time is again recorded at each stage of the call-when he arrives at the scene of the trouble, when the repairs are finished, and when he returns to the plant.

Then come the following notes: Number of truck used on the call; number of miles traveled; speedometer reading at start, speedometer reading at end; and space for remarks, where a brief account is made of the work done. The last line is reserved for countersigning by both driver and mechanic. (Form reproduced above shows typical entries).

Six Common Causes

AT THE end of every month, the Fleet Superintendent compiles the information on the sheets of the book. This compilation is invaluable as it immediately puts the finger on the outstanding sources of trouble. Most of our calls fall into six categories-ignition failures; fuel pump

(TURN TO PAGE 146, PLEASE)

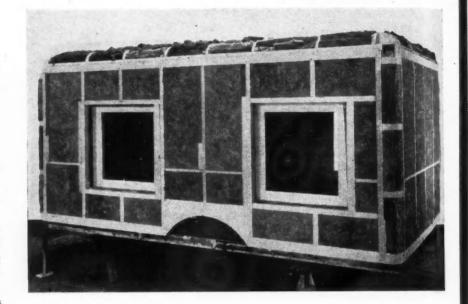


Left, Fig. 1. This butter body is 68 in. high 12 ft, 6 in. long, 80 in. wide; weighs 1360 lb.; has 2 to 4 in. of insulation top, side and bottom. Cost of materials: \$296.06

Below, Fig. 2. Studding and fiberglas insulation (6 in. side; 8 in. top) of ice cream body are formed around spruce box. Then tar paper, veneer and metal will be added

EAUTY of the smart, sturdy, silver truck bodies used by The Challenge Cream & Butter Assn. of Los Angeles goes more than skin deep. Fifteen years of body making experience, with approximately 750 produced within that time, has given this fleet a "know how." This experience has pointed out four main advantages and good reasons for building bodies: They cost less; are stronger, construction modifications can be made as and when desired; and they can get the type body they want when they want it.

Challenge turns out four styles



Construction methods better than double life

vide design flexibility and meet body replace-

Fleet Builds Sturdy, Low-Cost

of bodies. A 5250-lb. refrigerated ice cream body is made for from \$300 to \$400 cheaper than a comparable manufactured type. The 1940-lb. milk body and 1360-lb. butter body are each put together at a saving of from \$75 to \$100. An occasional stake body nets a saving of just a little less than the milk and butter bodies. This cheaper production is all the more noteworthy in view of the company's "Don't spare the horses" policy in turning out a good, durable body.

Body Life Doubled

SEVERAL construction features have doubled the life of the Challenge bodies. In fact, many bodies outlived several chassis

Strength is gained by use of twice

the ordinary number of angle iron braces and heavier than normal oak studs and joists. Welding the body to the chassis with angle irons has eliminated any backward or forward slipping and some chassis weakening, always caused by excessive boring of holes for bolting purposes. Every piece of wood going into a body is subjected to a treating and painting process in order to protect it from moisture.

Interior modifications can be made in accordance with the needs

or desires of the drivers or the company. Special compartmenting and partitioning of the interior is occasionally requested. For instance, milk bodies, which are not insulated, may require a special section to hold butter and cottage cheese. Special work of this nature would be costly if ordered from a manufacturer.

Need Met With Speed

THE fourth advantage, that of getting the body they want at the time they want it, speaks for itself.

m

nes

he

tha

ab

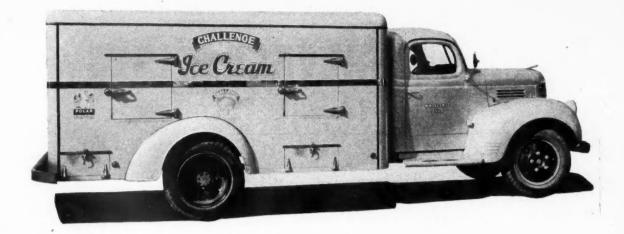
we

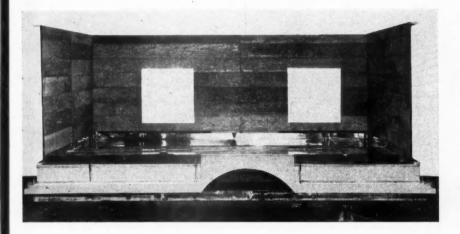
by

me

mi

00





Above, Fig. 3. Ice cream body weighs 5250 lb. Material Cost: \$685.86

Left, Fig. 4. An ice cream body under construction shows copper flooring over 8 in. of cork. One-inch stripping is placed over floor for air circulation

Insulated Bodies

of former bodies, cut costs \$75 to \$400, proment needs with speed By JACK KAY

When a body has served its usefulness, what fleet operator wouldn't heave a mighty sigh of relief to know that a replacement would be available in no more than two or three weeks, especially in these times? As a variety of products is distributed by The Challenge Cream & Butter Assn., building their own bodies means that an increased demand for a particular product—ice cream, milk, butter, cheese—can be met with the appropriate type of body to handle the increased business.

The general construction procedure for all four types of bodies follows the standard pattern employed by regular body manufacturers. Preparation of material, however, differs in some respects.

All Wood Treated and Painted

AS MENTIONED previously, all
wood going into the Challenge
bodies is treated and painted. After
the wood is sawed out, ready for use,
it is given an overnight soaking in a
tank of wood preservative. The next

morning, the wood is removed from the tank and stood up on end to drain. It takes about a day's time for it to drain evenly and dry. The wood is painted when the entire framework has been assembled. It is believed that the paint helps the preservative preserve the wood.

Treatment of wood for the ice cream bodies, however, follows a different process. Tongue and groove spruce is used in the ice cream bodies and is boiled for three minutes in paraffin. Drying time is approximately one hour. It was found necessary to treat wood for the ice cream bodies differently in order to avoid the danger of the ice cream taking on the smell of any chemical or alien substance. Paraffin was found to be the cheapest and safest from that standpoint.

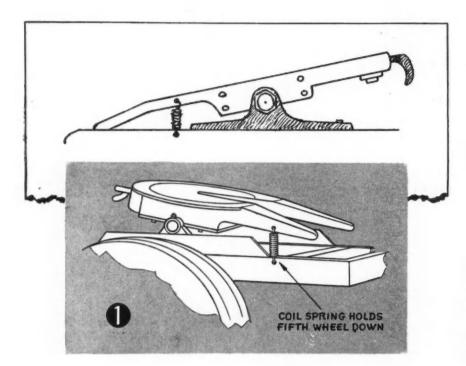
The preparation of material also includes the painting of the back side of all metal to prevent rusting.

Construction Procedure

THE first step in construction is laying out the floor plan and bolting it together; 2 x 2 in. oak studs and 2 x 3 in. oak joists are used in all bodies. The oak studs are then bolted on with steel angle braces. Roof crosspieces come next, again

(TURN TO PAGE 120, PLEASE)

SHOP and SALVAGE HINTS



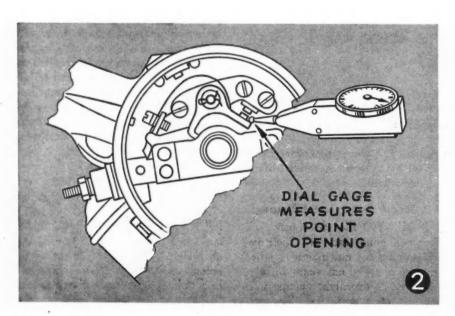


We have eliminated this hazard by installing pull-back springs as shown in the illustration to keep the fifth wheel pulled down to the normal or hook-up position.

We expect this modification to save considerable trailer damage in the future.

1. Fifth Wheel Improvement by A. A. Suggs, Shop Foreman Yellow Transit Co., Oklahoma City

We quite frequently have tractor fifth wheels which will remain in a forward tilted position so that in hooking up the trailer the rear legs of the fifth wheel punch holes in the nose of our trailers.



2. Ford Distributor Gage by James Schultz Philadelphia Electric Co.

Anyone who overhauls Ford distributors knows that accurate point clearance is vital to good performance, and unless you have a special cam angle fixture, it is a tough job to set the point clearance accurately.

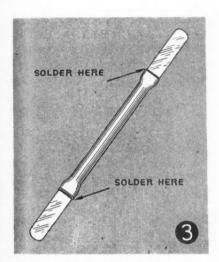
I have developed a method by which I can control the point opening within .0005 in. without the slightest difficulty and without any guesswork. Here's how:

Assemble the distributor in the usual manner and mount it in a vise so that the rotor can be turned by hand. Now mount an indicator so that its spindle touches the contact arm opposite the metallic contact segment. Slowly rotate the distributor rotor to bring the contact arm to the high spot on the cam, observing (on the indicator) the amount the arm moves. This movement of the arm is the exact point gap. Now adjust the stationary point until the indicator shows the desired gap. Repeat on the other set of points.

the conginate of



Commercial Car Journal will pay \$5 for acceptable shop hints and \$5 for parts salvage tips. A mapshot or a rough drawing with a simple explanation is all that is needed. CCJ will polish them for publication. Send one in today! Shown below is a typical contribution—just a rough sketch and a brief statement of the problem and its solution. See how it looks in Fig. 1. This brought A. A. Suggs \$5. There are other \$5 bills waiting for your contributions. Don't underestimate your ideas. Let the editor judge.



4. Ford King Pin Puller by William Kaufman Brockway Motor Co., Philadelphia

It is easy to pull the king pins from a Ford axle without a puller if you do this:

Jack up the axle and remove wheel, brake shoes, backing plate and locking pin. Take a piece of gas pipe 18 in. long and 1½ in. in diameter and place it under the king pin. Then lower the jack so that the weight is on the pipe.

Cut the mushroom top off the king pin and drive the pin down into the pipe. If it is frozen, it can be heated with a blow torch.

I find it is much easier to force a king pin downwards in this manner than it is to full it upwards.

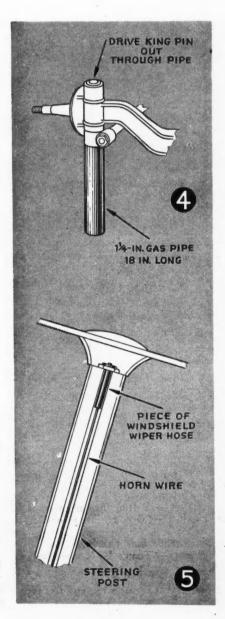
3. Improved Feeler Gage by Charles E. Unruh, Sr. Wildwood Auto Repair Wildwood, N. J.

When adjusting valves on engines that are hard to get to, we use a special feeler gage with a handle. We made up several sets of these feeler gages by taking pieces of copper tubing and sawing slots in each end. Then we insert the feeler blades of the correct thickness and flatten the ends of the tube. After the ends are flattened, the blades are soldered in place.

5. Horn Wire Salvage Tip by F. E. Seftchick Swift & Co., Brooklyn, N. Y.

On 1946 Fords the insulation on the horn wire at the top of the steering post wears through, and the wire shorts, causing the horn to blow. To remedy this trouble we disconnect the wire at the bottom, pull it out of the steering column and install a short piece of windshield wiper hose at the top of the post. This is just about the right size and will protect the wire for the life of the truck.

This tip will work just as well on other model trucks that give trouble of this sort.



e

e

o t

LAUGH IT OFF

Fond mother: "Yes, Ruth is very bright. She's only twelve, but already she's studying French and Algebra. Ruth, dear, say good morning to Mrs. Perkins in Algebra."

Then there was the absent-minded professor who sent his correspondence over to the golf club and went over to his secretary's and played a round.

Teacher (in grammar class)—
"Willie, please tell me what it is when I say 'I love, you love, he loves."

Willie—"That's one of them triangles where somebody gets shot."



"I would like to purchase some apples for my husband," said the safety director's wife to the grocer.

"What kind, madam?"

"I don't suppose you happen to know what sort Eve used?" she asked falteringly.

CCJ

Girl: "Isn't that a pretty butterfly on my knee? It must think I'm a flower."

Friend: "That isn't a butterfly, my dear, that's a horsefly."

Driver: "You say you only kissed her once last night? What was the matter?"

Mechanic: "No one interrupted us."

Did you hear about the absent-minded office manager who pulled his typewriter down into his lap and began to unfasten the ribbons?

CCJ

"OH, DEAR, I'VE MISSED YOU SO MUCH!"
AND SHE BAISED HER REVOLVER AND TRIED
AGAIN.

Customer—(Putting five pennies on the counter)—"Give me a can opener, please."

Clerk hands him a nickel.

Customer—"Thanks." (Leaves hurriedly.)

EVERY MAN' HAS HIS WIFE, BUT THE ICE

"Hey, waiter, there's a fly in my soup!"

"Grab your fork, quick. Maybe a trout will come after it."

The partners called their plant manager in and said: "We find that last year's business was the best since we opened the place. We know how much hard work you put in for us, and as a special mark of our appreciation, we are making out a check for one thousand dollars for you."

The manager stammered his thanks. "Yes," went on the other partner, "and if next year's business is as good

as this, we'll sign it."

Maud: "Clarence is so romantic. Every time he speaks to me he says, 'Fair Lady,'"

'Fair Lady.'"
Madge: "There's nothing very romantic about that. He's a street car conductor."

"That driver last night was sure fresh."
"Why didn't you slap his face?"

"I did; and take my advice, never slap a guy when he's chewing tobacco."

CC



WHOEVER NAMED IT "NECKING" WAS STRONGLY IGNORANT OF ANATOMY.

CCJ

The Maintenance Supervisor met a small boy, the son of a mechanic, with a dog. "Does your dog love you, my little man?" asked the M. S.

little man?" asked the M. S.
"You bet he does," enthusiastically replied the youngster. "He knows if he didn't, I'd kick the stuffin' out of him."

A college professor of psychology says that a good poker player could successfully handle any type of executive job. Perhaps so, but what would a good poker player want with a job?

CCI

Some cirls attain their ends by not taking enough exercise!

C C J

"Hi, Harry. That a new used car you're driving?"

"Yeah. I went into a garage to make a phone call and I didn't feel right to come away without buying something."



Our Parts Salesman reports meeting his friend on the street, all bandaged up and walking on crutches.

"What in the world happened to you?" inquired the P. S.

"Well, I had a date last night with my girl friend. We were dancing when her father came in. He is deaf and couldn't hear the music."

When the nurse carried triplets into the "fathers' room" of a Boston hospital, the nervous daddy looked them over carefully, smiled and said, "I'll take the middle one."

Overheard in the drivers' recreation room: "I can judge a girl by the color of her hair—Red, stop. Yellow, proceed with caution. What I'm looking for is a young greenhead."

"Don't you see that sign—'No Smoking'?"

"Yeah, but you can't do what all the signs say. For instance, that one over there says, "Wear Girly Girdles."

"From life's book of tears and laughter, I've gained this little bit of lore; I'd rather have a morning after, Than never a night before."

Resume Reading



Causes and Cures of Excessive Oil Consumption

Worn rings are only one of many factors that can cause high oil consumption. Check list gives 70 others to aid in trouble shooting "oil burners".

NY mechanic can throw a new set of piston rings at an oilthirsty engine-and sometimes even effect a cure-but the experienced man knows that worn rings are only one potential trouble spot, and that a careful check of other units is in order while the engine is down for overhaul. Several thousand miles between re-ring jobs can produce wear in other spots which can contribute just as much to high oil consumption as worn out piston rings. In fact, a total of 70 causes of high oil consumption in an engine have been listed on the following pages for the convenience of the service man in trouble shooting this condition. The list contains both direct and contributing causes. Our immediate consideration will be given to direct causes. If any of these causes cannot be established, the mechanic should consult the check list for other possibilities.

Two Categories

THERE are only two ways in which an abnormal amount of oil can leave the crankcase; by going

into the combustion chambers and through external leaks.

COMBUSTION CHAMBER Loss: Oil can pass into the combustion chambers in only three ways: through a broken or porous vacuum booster pump diaphragm, through worn intake and exhaust valve guides on overhead valve engines and through worn intake valve guides on L head engines and past the piston rings.

EXTERNAL LEAKS: External leaks are too often overlooked as a cause of high oil consumption, though one of the easiest troubles to remedy. When one considers the fact that one drop of oil lost every 20 ft. is equivalent to a quart of oil every 100 miles, it becomes obvious that external leakage is a definite and important cause of high oil consumption.

Worn Cylinder Walls

WORN, wavy or tapered cylinder walls are one of the frequent reasons why piston rings will not seat properly in the cylinder. Wavy cylinders contribute more to the failure of a set of rings than a large amount of taper or out of roundness. In this case the rings cannot follow the low and high spots to seal the combustion chamber against gas leakage and oil pumping. While piston rings are designed to take care of a small amount of taper and cylinder distortion, any cylinder that is worn or tapered .015 in. or more should be rebored, according to many manufacturers. A hone can be used to remove small variations in the cylinder.

Worn Piston Skirts

WORN or collapsed piston skirts cause excess clearance which will allow the piston to rock in the cylinder, wearing the top and bottom and scraping the edges off the rings. The bottom of the skirt of the piston was designed to scrape a certain amount of lubricating oil from the cylinders, and when it collapses, the rings are forced to control much more than the usual amount of oil. If the piston skirt is worn or collapsed beyond allowable limits, a new piston should be installed. A piston expander should be used or the piston diameter should be increased by some suitable process.

(TURN TO NEXT PAGE, PLEASE)

... Excessive Oil Consumption

(Continued from Page 51)

Worn Ring Grooves

WORN ring grooves or broken lands increase blowby and oil consumption, and will eventually cause ring breakage. Excessive clearance between the ring and the ring land permits a movement of the ring up and down in the groove which will create a pounding effect on the piston lands. Most ring manufacturers recommend a clearance of not over .006 in. between the outer edge of the ring and the outer edge of the top ring land, 1/16 in. in from the face of the land, in order to secure the proper seat of the ring against the side of the ring groove.

The mechanic should watch for bent or partly fractured piston lands during the re-ring job because fatigue failure of the land is likely to occur after long periods of time. Many times this condition shows up after a job, when the mechanic has failed to make a careful check of land conditions.

Worn Wrist Pins

WORN wrist pins or improperly fitted wrist pins can cause such a heavy discharge of oil to the cylinder walls that the rings will not be able to remove it. This is particularly true in the case of rifle drilled rods, where oil is forced to the wrist pin under pressure.

Pins that are fitted too tightly will not allow the piston to expand and contract under normal heating and cooling and may cause distortion of the piston, creating the same effect as a worn or collapsed piston. Scuffing or scoring of the cylinder walls may result from this condition.

Worn Rings

WORN rings, obviously, are one of the most frequent causes of high oil consumption. In many cases premature ring wear is the direct result of improper installation or the use of the wrong type ring for

TROUBLE SHOOTER'S



CYLINDERS

Worn, wavy, distorted cylinders
Cylinder bores out of alignment
Block out of alignment with crankshaft
Rough finish in cylinders
Scored cylinder walls

PISTONS

Worn pistons
Out of round pistons
Improperly fitted pistons
Misalignment of piston and rod assemblies
Worn piston pins
Worn ring grooves
Piston pin hole out of alignment
Insufficient drain holes in oil ring grooves
Lack of drain holes in bevel or chamfer
Collapsed piston skirt
Insufficient clearance of ring gap

VALVES

Valve timing too late Incorrect tappet clearance Worn valve seats Worn valve stems or guides Leaky or burnt valves Plugged valve chamber drain

BEARINGS

Scored con-rod bearings
Out-of-round crankshaft
Worn main bearings
Leaking main bearing seals
Misaligned bearing caps
Worn camshaft bearings
Bent crankshaft
Spurt holes in wornerods
Plugged oil seal drain

RINGS

Worn or broken rings
Wrong size rings
Rings out of round, warped, twisted
Poorly designed rings
Rings fitted too tight in grooves
Carbon in oil ring slots
Insufficient ventilation of oil rings
Insufficient tension in rings

OIL

Oil level too high Contaminated oil Paor grade oil Thin, diluted oil Oil pressure too high Broken oil lines Sludge in engine

the particular engine or the peculiar circumstances under which the engine is operating. All piston rings are made with surfaces designed for rapid seating in the cylinder. For this reason, it is not recommended that used rings be installed in a cylinder. Since the seating surface has been removed, used rings will not seat properly in the cylinder when installed the second time.

Worn Rod Bearings

WORN connecting rod bearings cause excessive amounts of oil to be thrown against the cylinder walls and increase the amounts of cylinder oil which the rings must scrape down.

Cylinders, pistons and rings are lubricated by the throw-off of oil from the main and connecting rod bearings, and this throw-off is affected by several conditions: out-of-round and taper of crankshaft journals, clearance between the bearing and the journal, the condition of the bearing surface and the oil pressure itself. Limits on taper or out-of-roundness of any journal should be held to .0015 in., according to manufacturers. Bearings can be worn much more than this without producing knocking, yet they will permit several times the normal amount of oil to be discharged so that no ring can effectively remedy the excessive oil consumption.

th

cl

th

su

di

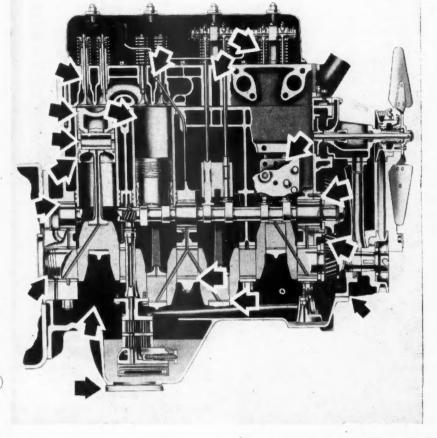
ne

is

n

80

0



Arrows show a few of the spots where oil loss may develop. The accompanying check list gives a total of 70. Direct causes are enlarged upon in the text



EXTERNAL LEAKAGE IN:

Outside oil lines
Front main bearing
Rear main bearing
Oil pan gaskets
Crankcase ventilator pipe
Fuel pump gaskets
Valve cover gaskets
Timing gear cover gasket
Crankcase drain plug
Oil filter gaskets
Oil filter connections
Breather pipe

MISCELLANEOUS

Clagged breather, all filter
Defective booster pump diaphragm
Bent, misaligned con-rads
Worn timing gears or chain
Improper timing
Clagged muffler, tail pipe
Overheated engine
Faulty carburetion
Leaky intake manifold gaskets
Defective spark plugs
Sustained high speeds
Improper break-in of newly re-rung
engine

Worn Main Bearings

WORN or cracked main bearings, can like connecting rod bearings, can produce the same conditions and should be inspected and treated in the same manner. Excess oil discharged from the main bearings is thrown up into the cylinders so that a similar oversupply of oil is on the cylinder walls. A direct result of worn main bearings is low oil pressure and a resultant high rate of wear due to insufficient lubrication of connecting rod bearings and cylinders.

New bearings should not be installed, however, until the crankshaft is checked for out-of-roundness. Journals which are out of round or scuffed will soon knock out the most

carefully fitted bearing. When bearings are fitted to an out-of-round shaft, the clearance may be perfect for the larger dimension, yet it will be improper for the smaller dimension and may discharge as much as 25 or 30 times the proper amount of oil. For this same reason, bearing caps should not be filed when fitting bearings. It is obvious that this practice takes up excessive clearance in one direction while still permitting excessive quantities of oil to flow at the sides.

·Worn Camshaft Bearings

WORN or cracked camshaft bearings are sometimes overlooked by the mechanic as a cause of high oil consumption. However, since these bearings are lubricated in most cases under pressure, wear will permit excessive quantities of oil to be thrown off over the inside of the crankcase, and rings cannot possibly remove all of it.

Worn Valve Guides

WORN valve stems and guides allow oil and air to pass into the combustion chamber during the suction stroke. The oil is burned and carbon is formed. This is detrimental to piston rings and valves as the carbon will gum up these parts and aggravate the condition. In many cases, an engine will use more oil

(TURN TO NEXT PAGE, PLEASE)

... Excessive Oil Consumption

(Continued from Page 53)

following a re-ring job than it did before if the valve stems or guides are
worn, due to the loosening of carbon
and/or sludge around the guides.
This is true particularly in overhead
valve engines, since the oil can actually drain down between the valve
guide and valve while the engine is
not running. While most engines are
designed so that oil loss at the intake
valve guides is not a factor in oil
consumption, the valve guides should
always be checked while the engine is
torn down.

Defective Diaphragms

DEFECTIVE booster pump diaphragms has about the same effect on oil consumption as worn valve guides and stems. The diaphragm is exposed to the oil in the crankcase through the hole through which the operating mechanism projects. Even a porous diaphragm will permit oil to be sucked into the booster pump chamber, and into the intake manifold. Sometimes the diaphragms break around the bolt holes, but in either case a large amount of oil can be lost. This condition will cause the engine to smoke at the exhaust, and many mechanics might be tempted to blame the rings. New diaphragms should be checked before installation, as they may have become porous through heat, age or defective workmanship.

Worn Bearing Seals

WORN front or rear main bearing seals can be detected by checking external leaks, but this may be a difficult undertaking since many rear bearing leaks will not show up during a shop test due to the fact that it isn't always possible to load the engine and create a crankcase pressure. Then, too, rear bearings leaks are caused by crankshaft end play which shows up only when the engine is loaded through the rear wheels. Leaks of this nature should be located on the road. An oilcloth or heavy canvas should be suspended under the engine during the road test so that the actual amount of leak can be detected by checking drops on the cloth.

Clogged Breathers

CLOGGED vents or breather pipes stop the circulation of air through the crankcase and result in deterioration and breakdown of the lubricating oil, which in turn will cause rapid wear of all parts. When the crankcase pressure is above normal, oil is forced out through the ventilating system or past the main bearings, up the distributor shaft or past the fuel pump cross-shaft, and leakage cannot be prevented. When the crankcase pressure is too high,



Leading factors affecting oil consumption: A, collapsed piston skirt; B, worn rings; C, worn ring lands; D, worn cylinder walls; E, worn wrist pins

the underside of the engine generally has the appearance of leaking at every joint.

Bent Con-Rods

BENT connecting rods allow the pistons to become cocked in the cylinder and will eventually cause scoring or distortion of the cylinder walls. The rings will not form the proper seal and rapid wear will take

place. This will be accompanied by excessive amounts of oil on the cylinder walls which the rings cannot remove. For this reason, the mechanic should always check and align the connecting rods as part of the re-ring job.

Worn Timing Gears

WORN timing gears or chain causes late intake valve opening and is one of the common causes of high oil consumption. When the timing chain is stretched from wear, the intake valve opens late. The piston, starting down on the suction stroke, builds up a high cylinder vacuum which pulls oil from behind the top ring. For this reason, some manufacturers recommend installing a new timing chain after 30,000 miles.

Engine Overheating

DEFECTIVE cooling systems, that is, systems clogged with rust and sludge, will cause cylinder distortion, blowby and oil pumping. This is due primarily to the development of hot spots in the engine block which prevent proper cooling of the cylinder walls. Hot spots cause expansion and eventual distortion, and inadequate overall cooling will cause the engine to operate at above normal temperatures, which in turn will cause scuffing and scoring of the cylinder walls, as it is difficult to maintain a film of oil on the walls at high temperatures. For this reason care should be taken to clean the system thoroughly when the engine is rerung.

Engine Sludge

ENGINE sludge itself is a common cause of high oil consumption. Sludge collecting in the oil pump screen or in oil lines prevents proper circulation of the oil, resulting in rapid wear of the parts through inadequate lubrication and improper cooling. Sludge clogs the oil return holes of the piston and the oil ring slots and reduces the ability of the ring to control the oil.

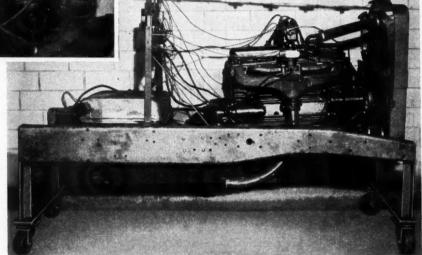
The engine block should be thoroughly desludged as part of the rering job since it will contaminate the new oil and result in excessive oil consumption, even after the overhaul. This should be done before the engine is pulled down on a re-ring job and before assembly on an overhaul.



Miller Transfer's engine test and break-in stand is shown below. It is constructed from an old chassis frame and other parts, old and new. It has its own radiator, gas tank, battery and instrument panel. Exhaust gas is piped outdoors through a 2½-in. flexible tube to an overhead system. Ample light for checking is provided by four clearance lights mounted on a bracket above the engine

Close-up of the stand's instrument panel. The instruments are, A, heat indicator; B, throttle; C, oil pressure gage; D, voltage regulator; E, ignition switch; F, tachometer; G, starter; H, light switch; I, coil; J, vacuum tester; K, choke; L, ammeter. Extra panel at top is used to show oil pressure at various engine speeds

by ROBERT A. KUNAU
Maintenance Manager,
Miller Transfer Co., Kokomo, Ind.



Engine Break-In Stand Cuts Breakdowns

ACH of our 60 truck and tractor units runs close to 60,000 miles a year and the average age is a little more than six years. As a result, we found our maintenance trobles last year mounting to an all time high in the history of our trucking business as contract haulers and common carrier operators.

The main trouble with our maintenance system showed up in road failures soon after major engine overhauls. While our engines were rebuilt properly, too many premature road failures would occur soon after putting these engines back in service, trusting the driver to break them in under actual load carrying conditions.

For example, we used to bring a truck or tractor into the shop for an

Shop-built engine test unit reduces overhaul troubles, cuts monthly road calls from 50 to 10, increases engine life 20%

engine overhaul job, then let it idle and give it a brief test run totalling five or six hours of total break-in time. That was not long enough. Back on the road, the operator often drove it too fast, either burning out the valves or causing the rings to stick. A premature road failure resulted.

There were other inherent weak-

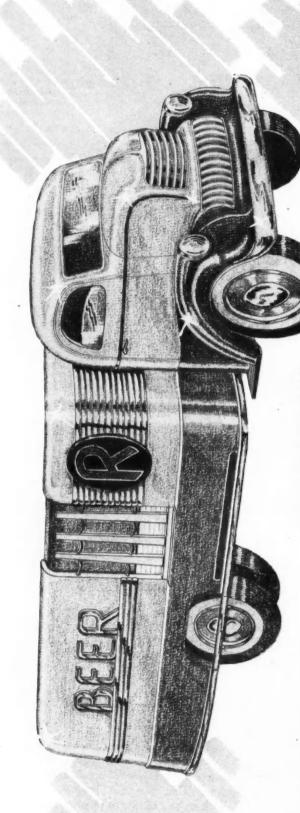
nesses in this old method. Mechanics as a rule do not like to break in a job by the road testing plan, and that is obviously an expensive method. Likewise, a driver just naturally expects to have his truck in good condition after an overhaul. It is hardly fair to him to send him out with a rebuilt engine that has had only a few

(TURN TO PAGE 150, PLEASE)

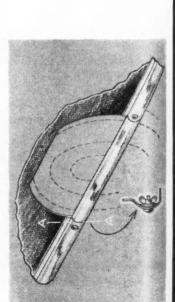
All Material Copyrighted 1946 by E. M. Westberg

CUSTOM BODY SERIES

To insure a custom design for your vocation, be sure to mail answers to questionnaire on Page 43, June CCJ



by E. M. WESTBERG Body Designer



Attractive side and end loading body features high loading efficiency; 12x7x4-ft. unit holds 98 quarter barrels or 182 cartons

has resumed a prewar reader service on vocational body design which fleet operators can put to profitable use in Starting with the June Issue, Commercial Car Journal improving the appearance of their fleets, increasing payload and boosting efficiency in cargo handling.

While these designs are copyrighted, arrangements can be made with the designer for procuring detailed lems. If such service is desired, write to Editor, Commercial Car Journal, 56th & Chestnut Sts., Phila. 39, Pa.

construction drawings and consultation on specific prob-

body builders and, having worked in body shops, knows

the practical problems of body building.

In the past, Mr. Westberg has designed numerous bodies for CCJ readers. He is well known among eastern

can, however, with slight altera-

IHIS month's design, the fourth

in the new series of postwar custom bodies, is of a unit to be used operations, and is adaptable to

either case or barrel loading.

primarily for local beer delivery

E. M. Westberg

tions, be made adaptable to numerous operations where a low

The purpose in designing a body of this type has sacrifices being made in the rugged and sturdy basic been to offer to operators a more appealing and attractive side and end loading unit than the conventional square, somewhat box-like type of bodies which are Improved appearance has been attained in this design with no construction which is required particularly for operaside and open top type of body is required. generally used for this kind of hauling.

Functional Features

shows the recessed side step. A similar step is incorporated across the full width of the rear.

and accentuates body length.

Bottom sketch shows the stainless steel tread plate at the side opening. The stakes are dark-stained, spar varnished and have leather covered chains

Center illustration

Detailed sketch at top shows the removable rub rail section across the rear wheel opening in the skirt. This connects with the permanent rub rail

tions where barreled beer is transported. Moreover,

it features high loading efficiency.

MPROVEMENTS in the overall general lines of the body have been effected by using round surfaces at

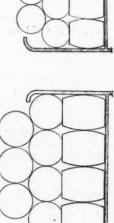
proves appearance and functions as a retaining rail The rounded top both imfor the top row of cases or barrels. the front, rear and top.

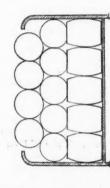
To accentuate length by long, unbroken lines, the nating the rear fenders. In addition, a full length rub lower skirt panel has been flared to full width, elimirail, with the section passing over the rear wheel cutout easily removable, also is used to give the desired To further improve apppearance, changes in the basic lines have been supplemented by shallow corrugated stainless steel or aluminum used as a background for the brand insignia and as a base for the polished cast aluminum lettering.

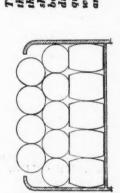
Special Features

NUMEROUS special features are suggested, such as stakes, be dark-stained, spar varnished and have stainless steel tread plates and side doors for continuous panel lines. If wood stakes are used, as illustrated, it is recommended that they, as well as the rear leather covered chains where chains are used.

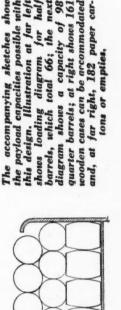
Other features: Straight loading floor without wheel. (TURN TO PAGE 172, PLEASE)

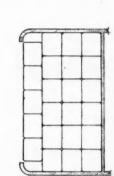


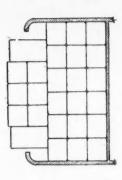


















USE POSTCARD-NO STAMP NEEDED

PUBLICATIONS

L71. Diesel Engine Booklet

Here is a publication that should interest every fleetman—a newly revised edition of a well-known oil company's booklet, "Lubrication of Diesel Engines." Designed to acquaint fleetmen with the characteristics and peculiarities of diesel engines, the 48-page booklet takes up the history of this type of engine, the fundamentals of design, the types and advantages of two-stroke and the four-stroke engine.

Fuel-inspection systems are discussed, as is the combustion principle, with photographs and drawings showing each intricate detail. While the booklet features lubrication problems, 26 pages are devoted to operating principles that should prove invaluable to the owners of trucks equipped with this type of engine.

A great deal of up-to-the-minute information is provided on modern diesel lubricants. The booklet includes a chart giving lubricating oil recommendations for several types of diesels, and specific problems of individual engines have been presented in matter-of-fact, unprejudiced style.

The last part of the booklet is devoted to the maintenance and operating problems of diesel engines, featuring such problems as ring sticking, bearing failures and oil contamination. A double-page, easy-to-read trouble shooting chart completes the text. Write L71 on the free postcard for a copy.

L72. Fire Fighting Book

With our annual fire loss reaching over \$455,000,000, this new 20-page booklet entitled, "How to Fight Fires and Protect Property," should be very timely for fleet owners and industrial property owners. Graphically explaining and illustrating the latest techniques in fighting fires with carbon dioxide and other fire extinguishers, the booklet answers such questions as:

What type fire hazards should I recognize? How can I mobilize my employee

fire defense? What is the correct spacing and bracketing height for various types of fire extinguishers?

In addition, the booklet gives the latest approved methods of operation for carbon dioxide, soda-acid, foam, pump tank and carbon tetrachloride extinguishers.

This booklet, with its detailed photographs and convincing charts, would be good material for all employee reading. Pictures will show them exactly how to use the fire equipment in their shop. A few minutes reading of this publication, and they will be ready to meet fire emergencies. Write L72 on the free postcard for a copy.

L73. Welding Equipment Catalog

A new and complete 64-page catalog of Hollup electrodes and National oxyacetylene gas welding rods has just been published and made available to the fleet field.

Included in the catalog are complete descriptions, color identifications, specifications conformed to, physical properties, welding procedures, recommended ranges and electrode sizes available.

There are tables on the weldability of metals, appearance inspection of welds, electrode consumption estimating chart and definitions of welding terms—all valuable information to the welder.

A copy of this publication may be obtained by writing L74 on the free postcard.

L74. Dry Ice Data

"Mathieson Dry Ice," a 32-page illustrated booklet, describing the manufacture, distribution and uses of dry ice, has been made available to the fleet field.

Featured in this new publication is a series of charts estimating amounts of dry ice required to maintain various temperatures in refrigeration units of many different sizes. Included are an ice cream packing chart and a table showing tem-

A selected list of the latest in literature — books, pamphlets, catalogs — chosen by the staff to help fleet operators solve maintenance and operating problems. Use the free postcard.

pa

tai

ille

th

wi ac to

ja th

01

in

as

et

in

be

pl

U

P

ir di ic cl

peratures required for protection of fresh, dried, smoked, and frozen fruits, vegetables, meats, sea foods, and dairy products.

Important factors in dry ice refrigeration, such as design and packing of truck bodies, bunkers, and storage cabinets, are discussed and plans for a dry ice storage box are shown. The Mathieson dry ice liquefier, which has a capacity of 1000 lb. of dry ice, is depicted.

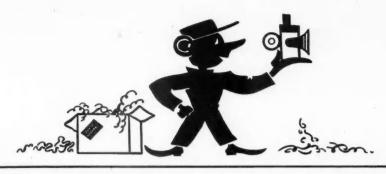
The development of dry ice, how it is produced today, and many of its industrial applications, are also presented in the booklet. Write L73 on the free postcard for a copy.

L75. Block Repair Guide

The highway vehicle operator who has experienced a cracked engine block or head hundreds of miles from his terminal will be the most appreciative one to receive a copy of "Where to Go for Repairs on Cracked Engine Blocks and Heads," now being issued to the industry.

In case of experiencing a heat, freeze or stress crack, the driver now can consult this directory to contact the nearest K & W distributor, who will either quickly make the repair, or refer the driver to the nearest properly equipped shop. In either event, the vehicle should be back on the road in a few hours, instead of being held up indefinitely for replacement parts or other assistance. This 52-page booklet lists over 2500 K & W distributors throughout the United States and Canada.

Because of the valuable information contained, including a digest of an O. D. T. report on repairing cracked engines and blocks, this booklet is an essential item in the tool kit of every cross-country vehicle. White L75 on the free postcard for a booklet.





USE POSTCARD-NO STAMP NEEDED

The newest in replacement parts, accessories, shop equipment and supplies. For more details of products described and illustrated on these pages, use accompanying free post-card.

P22. Adjustable Lock Wrench

A new locking hand-wrench which is said to have gripping strength equivalent to one-ton pressure is now being manufactured by A. C. E. Inc., Detroit, Mich.



The double lever or toggle action of this new type wrench permits it to be used as a combination straight, end or pipe wrench, vise, toggle press, clamp or pliers, according to the manufacturer. Parts up to any size which will fit the maximum jaw opening of 1½ in. can be held by the wrench for tooling, drilling, grinding or machining, without slipping or changing position, it is said.

Its use as a clamp on such operations as welding and soldering, pattern making, etc., and its general usefulness in removing stubborn bolts, cotter pins and wire hending or splicing operations would indicate a wide distribution, it has been stated.

Made of alloy steel and all cadmiumplated, the wrench is 10 in. long.

Use Free Postcard For More Details.

P23. Air-Operated Riveter

A new-type, air-operated portable riveting machine, developed by Freeport Industries, Inc., Detroit, Mich., is said to be ideally suited for riveting on brake lining, clutch plates and for industrial use.

Outstanding feature of this riveter is the "metering type" foot controlled valve, designed to make operation easier. The opening and closing of the plunger of the valve of the foot pedal is operated by a roller on the pedal casting, relieving wear on the plunger and facilitating its operation.

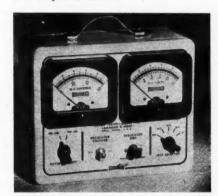
The pressed steel diaphragm in the unit is said to eliminate leakage, friction and maintenance problems.

The machine is small and compact—standing 9 in. in height. Five size anvils are available—¼, 5/16, %, 7/16 and ½ in. Two size knock-out punches and two size crimping punches are available.

Use Free Postcard For More Details.

P24. Primary Circuit Tester

Simplified operation strikes the keynote for the new circuit tester Model 125E developed by Lanagan & Hoke, Philadelphia. This new primary circuit tester is claimed to make complete and rapid checkups on generators, regulators, relays, etc., in a simplified manner.



All meters are D'Arsouval movement. The voltmeter is equipped with four scales and the ammeter with three scales. All switches have silver contacts. Switches are provided to take care of polarity of all the various meter scales. Equipped with

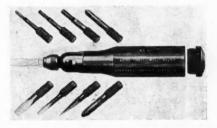
PRODUCTS

fixed nichrome resistors for setting 6-, 12-, and 24-volt systems without the battery in circuit. This makes it easy for the operator to set regulators without taking into consideration the condition of the battery.

Use Free Postcard For More Details.

P25. Speed Tool Kits

Hallowell speed tool kits have now been made available to the industry in four different assortments—the socket screw.



the socket wrench, the auto and the home kit. Designed of light weight precision steel with plastic handles, the kits contain 50 different tools for light work.

The driver is designed with a swivelbit chuck which can be adjusted to five driving or wrenching positions. Interchangeable tools to fit the chuck are carried in the hollow Celanese plastic handle.

The socket screw set contains keys for driving socket set, cap, Phillips and slotted screw heads. The socket wrench set comes in two handle sizes with 6- and 12-point hex sockets from No. 4 to ½ in. The auto kits contain those small tools necessary to auto maintenance and the home set includes a gimlet, tack lifter, square awl, Phillips screw driver, ¼-in. and ½-in. flat screw drivers and a bottle cap opener.

These kits are available from jobbers or from the Standard Pressed Steel Co., Jenkintown, Pa.

Use Free Postcard For More Details.

(TERN TO NEXT PAGE, PLEASE)



PRODUCTS

THE POSTCARD-NO STAMP NEEDED

(Continued from Page 59)

P26. Improved Steam Cleaner

A new streamline design steam cleaning machine known as Model JO Hypressure Jenny Instantaneous Steam Cleaner has been announced by Homestead Valve

Mfg. Co. of Coraopolis, Pa.

Model JO Hypressure Jenny Steam Cleaner is a compact, portable, streamlined, steel-fabricated, electric-welded unit with all machinery end-mounted and fully accessible. It can be furnished with or without a removable, die-formed steel machinery cover. Large, semi-steel wheels and



a steering tongue afford easy portability and maximum utility permitting easy transfer from one cleaning job to another. Oil or gas-fired units are optional, and the only requirements for operation are an electric current outlet and a hose connection to water supply.

Cleaning is accomplished by a highly atomized mixture of steam, hot water and cleaning compound applied under pressure through a spray nozzle. Normal operating pressures range from 80 to 120 lb. at 90 gal. per hour water capacity. Where powerful flushing and rinsing action and extra water capacity are required, the use of the Adjusta-Blast Gun is recommended, which increases water capacity up to 480 gal. per hour.

Hypressure Jenny is said to clean almost instantly, is economical and requires only ordinary plant labor to operate. Overall dimensions are 55 in. x 28 in. x 471/2 in.; weight, 520 lb.

Use Free Postcard For More Details.

P27. Rust-Proofing Coating

Year-round truck and auto protection is the claim of the Ohio Muf-L-Cote Co., Akron, Ohio, for a new thermo-plastic compound developed by the company for spraying undercar areas as a protection against rust and deterioration.

Muf-L-Cote is said to be a lasting treatment for fenders and areas exposed to the weather. The solution is applied under pressure to the surface and will resist extreme movement without cracking or breaking, according to the manufacturer.

Designed to take the place of painting and called superior to paint as a corrosion-resistant covering, the new solution is said to have sound-killing properties as well, possessing maximum bonding affinity for the metal.

Use Free Postcard For More Details.

P28. Exhaust Gas Analyzer

A simple, rapid check for improper operating conditions in truck, automobile and all types of gasoline combustion engines can be made by studying exhaust gas composition and intake manifold vacuum with Ranarex Exhaust Gas Analyzers developed by The Permutit Co. of New York City.



Ranarex Exhaust Gas Analyzers, which not only mechanically measure the gases of combustion but also indicate improper manifold vacuum by a built-in vacuum gage, permit the mechanic to quickly locate and isolate troubles caused by faulty ignition, timing, incorrect valve operation and carburetion errors. The results of engine adjustments are constantly shown by means of a dial pointer.

Use Free Postcard For More Details.

P29. Safety Barrel Stand

An all-metal, all-welded stand for hold. ing 55-gal. barrels, from which liquids are dispensed, is being marketed by Western Machine Works, Bruni, Tex. The stand consists of a 2-in. steel pipe frame, attached to an angle iron base by means of hinge pins, so that the frame can be tilted forward or backward. The frame is equipped with a cradle arrangement in which the barrel is held by a specially designed notched binder. Straight or bulged barrels can be securely held in the cradle.

The cradle, can be rotated by means of a lever on the outside of one leg of the frame, so the barrel can be locked in either a vertical cr horizontal position, or rotated by the cradle lever.

Use Free Postcard For More Details,

P30. Hydraulic Brake Bleeder

The new hydraulic brake bleeder unit developed by Howard Farback & Co., Cincinnati, Ohio, is said to provide fast, efficient brake bleeding. It is compact and streamlined, mounted on easy-rolling swivel casters. Of pressed steel-electric weld con-



struction, the unit is described by the manufacturer as rugged and long-lasting.

The bleeder comes equipped with a convenient carrier for master cylinder adapt-

Use Free Postcard For More Details.

P31. Tire Lubricant

Tire-Lube, a specially prepared rubber lubricant, has been made available to owners of trucks, buses, and other commercial vehicles.

Developed by the Peerless Chemical Co. of Detroit, the lubricant is applied with a brush or spray gun to the exposed surface of an inner tube and the tire beads on which it travels when being inflated. Tire-Lube, by its lubricating action, permits the tube to enter the tire, and then settle against the rim, without harmful rubbing. This prevents the tube from being cut, cracked, bruised or stretched unevenly as often happens when its path of travel is dry.

In addition, Tire-Lube, through its lubricating action, is said to facilitate the fixing of flats by making the mounting and demounting of tires easy.

Use Free Postcard For More Details.

P32. Improved Fountain Brushes

An improved line of fountain brushes has now been made available to the industry by the manufacturer, A. Laitner & Sons, Detroit, Mich. The brushes, with better bristles and a new button control shut-off built into the handle, are said to speed the washing of equipment and to result in the saving of water and soap.



With these brushes the surface receives a constant flow of clean, fresh water. The grit and dirt is washed off and the surface is rinsed without streaking, the company states.

Either bristle, horse hair or fiber brushes are available for a variety of jobs. When a brush wears out after long usage, it can be replaced by simply securing a new brush to the casting.

Use Free Postcard For More Details.

P33. Automatic Road Sander

Production of a new streamlined model Elston Electric sander and development of a Safety Grit processed for exclusive use in Elston Sanders is announced by Highway Safety Appliances, Inc., of St. Paul, Minn.



Features of the Elston Sanders have been retained in the new streamlined model for trucks, plus many new improvements, chief of which is elimination of all cast iron and replacement with aluminum.

Other new features are a hopper of cold rolled steel with one center weld to give added strength and protective finish; smooth flowing, rounded corners that provide easier installation and add beauty; tanks lined with synthetic rubber eliminating condensation; an aluminum alloy unit housing that protects the entire valve and solenoid assemblies, and increased power of the solenoid assembly, with new rubber bellows to keep the unit free from dust and dirt. The rust-proof unit housing may be removed from the hopper without disturbing the sander's attachment to the

(TURN TO PAGE 194, PLEASE)

EARS to the GROUND

Ford Features

From a Ford dealer, one of our "gumshoes" gets the strictly unofficial dope that the new Ford cars and presumably the new Ford commercial jobs will sport the following mechanical features: (1) New V-8 engine—longer and narrower; (2) New type clutch—less trouble to remove and repair. The suspension also is said to be in for some alteration, with adoption of the Hotchkiss drive a good possibility.

. . . and Future

To even the casual observer the Detroit breeze these days carries still more Ford rumor—of the 2½ to 3-ton truck, due next spring, and said to have a V-8 (perhaps the Lincoln engine) developing upward of 140 h.p.

Power Steering Note

Hydraulic steering for heavy production jobs has been predicted for some time as just around the corner. Now, by way of our Mid-west reporter, we learn that one of the big producers of heavy heavies has adopted it for some specialized applications. More details at a later date.

Independent Front-ends

Like many other developments on the hush-hush list during the war were some 2½-tonners with independent front-end suspension built experimentally for the Army. Our initial probing brought forth only these scant details: some employed coil-springs, others torsion bars; both were built by a number of manufacturers. Results of this experimental work should make interesting reading for fleetmen. A staff bloodhound is on the trail of details.

Awesome Wallop

A new line of Buda diesels, known as series 844 is in the wind. The engine is

reported to pack an awesome wallop with so much reverse power that under normal conditions they can out-live and outeconomize a smaller engine. Weight is being held to an irreducible minimum so that increased power wil not be obtained at any appreciable sacrifice of payload.

Stays Brighter Longer

Amazing things are claimed for a new silicone paint, still in the development stage but definitely on the books at General Electric's chemical department. Our Schenectady snooper found test panels that had come through a severe three-year exposure test practically unscathed. But it will probably be another five years before vehicles, like lamp bulbs, stay brighter longer—almost indefinitely in fact.

Rounder Windshields

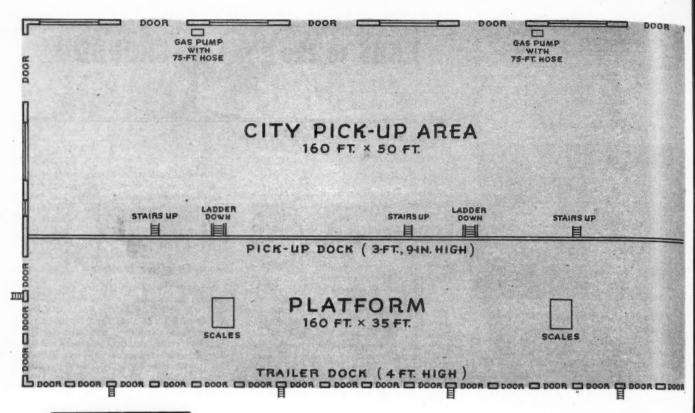
Mass production of curved glass for windshields is so near a reality that one large producer is erecting a brand new plant for this product exclusively. An interesting by-product problem is that of a windshield wiper that will exert equal pressure on the convex curves. Several wiper specialists are deep in research, expect the right answers in time for 1948 models.

Service Lift

Our Cleveland sleuth had his jaw enlarged an extra notch when he saw an advanced model of a new hydraulic lift being made by Ruger Co., Inc., of that city. From what we can make out of his excited ramblings, the lift features a long arm that can boost either front or rearends of a truck for servicing, reach under an engine to pick up a pan. a shaft or what-have-you, and in addition to all that it seems to be a natural for hiking loads over the tail gate. Full details are promised.



It would take Henry J. Kaiser's Permanente Metals Co. to bill this one as a "lightweight" job, but so help him, it is, relatively speaking. For even though it weighs 25.570 lb. and carries a load of 52,000 lb., its magnesium-alloy innards enable it to carry 6000 lb. more than a comparable job in steel





M. J. Zabarsky
Co-owner and Terminal Manager

EDITOR'S NOTE—On one of the hottest summer days, brothers M. J. (Mickey), Harry D. and Maurice Zabarsky, coowners of the St. Johnsbury Trucking Co. presented to an amazed New England trucking world their new freight terminal and shop at Cambridge, Mass. COMMER-CIAL CAR JOURNAL'S Associate Editor Bart Rawson was on hand to cover the event because CCJ believes that every fleetman, large or small, can benefit from a detailed description of this modern and magnificently-equipped structure. While there our man made an on-the-spot sketch to show the location of all major pieces of equipment, then wrote the accompanying description so that readers might visualize in detail just what makes a setup like this one tick.

Common Carrier's

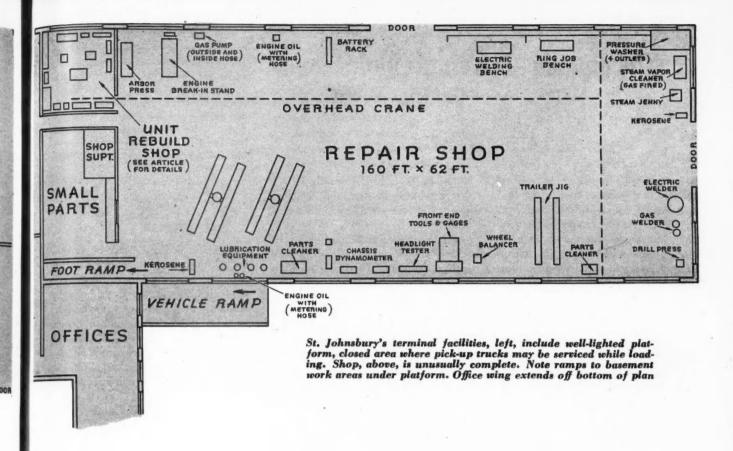
N UNUSUALLY sound basic plan, plus infinite attention to important details, makes the new Boston terminal and shop of the St. Johnsbury Trucking Co. a truly outstanding venture. Located in downtown Cambridge and easily accessible to all of the sprawling communities which make up the huge greater Boston metropolitan area, the terminal forms the southern anchor of the St. Johnsbury fleet which blankets the northern New England territory. Although company headquarters remain, at least for the time being, at St. Johnsbury, Vt., the Boston terminal is the company's largest and is equipped for every type of truck and trailer maintenance with the possible exception of extensive body rebuilding which is handled at the St. Johnsbury shop.

Although the accompanying layout plan gives as good an idea of the general arrangements as is possible

within the confines of our page limitations, it unfortunately does faint justice to the real efficiency that is built into this \$350,000 facility. Accordingly, the reader is invited on an imaginary inspection tour of the "business ends" of this combined terminal and shop. As this is being written, a sizable stock of huge blue prints are sprawled across the writer's desk and the story divides itself naturally into a discussion of (1) the building location and outside parking lots: (2) the loading dock; (3) the pick-up area; (4) the repair shops, and (5) the cavernous basement area which houses many important functions and is accessible by both foot and vehicle ramps.

Building Location

A RMED with detailed maps of streets, canals and railroads, a compass, a stop watch and an excellent sense of direction, it is possible



Uncommon Terminal and Shop

Efficiency is key note of new Boston terminal of large New England over-the-road carrier that coordinates all functions and needs of truck transportation in city block

by BART RAWSON

Associate Editor, Commercial Car Journal

for a stranger to find his way into the St. Johnsbury terminal. But it is not easy. Once the right combination of streets is reached, however, the big 325-ft. brick and glass structure

stands out like a beacon light. At once the visitor gets the impression that here is trucking at its best.

The St. Johnsbury "plot" as architects invariably call it, is a complete

city block, 425 ft. long, 175 ft. wide. The building stands in the northeast corner with a 15-ft. approach to the street at the east and a 20-ft. paved driveway extending the full north side. To the west and south is an L-shaped parking lot 85 ft. x 175 ft. on the west and 70 ft. x 165 ft. on the south side. All of this huge lot is surfaced with macadam "black top" and extending the full length of the loading dock are two concrete strips, one 6 ft. wide, to accommodate the trailer wheels, the other 10 ft. wide to provide solid footing for landing gear wheels. No matter how hot the summer sun may be, neither main wheels nor landing gear will "sink." Additional strips on the west end of the parking lot provide similarly substantial footing for surplus or temporarily stored trailers.

Ahead of the outside concrete strips, and under the normal parking (TURN TO NEXT PAGE, PLEASE)

... Uncommon Terminal and Shop

(Continued from page 63)

area for tractors when coupled to trailers at the dock, the "black top" was coated for a width of approximately 20 ft. with a special preparation, known as Jennite, which materially reduces the damaging effects of gasoline and oil drippings. Just another example of the infinite attention to detail which went into the design of this terminal facility.

The Loading Dock

ENTERING the building via the ladder at the extreme west end (left side of plan), the visitor finds himself on the 165-ft, x 35-ft, loading platform with a daily capacity of better than 1,000,000 lb. The dock is unobstructed by posts except along the north or pick-up side. Two platform scales are placed at convenient locations. To the west and south, 19 loading bays can be counted, each fitted with its new overhead door. These bays accommodate the overthe-road trailer units. Loading operations are protected from the weather by 4-ft. canopies overhead. Neatly printed signs which hang from the top of each door leave no doubt as to the ultimate destination of the loading trailers. Platform height on these sides is exactly 4 ft. determined to be the most efficient height for the company's over-theroad units.

On the opposite side of the platform is the city pick-up loading dock with a capacity of 16 trucks. Platform height on this side was reduced to 3 ft. 9 in. to best accommodate the lower floor height of the smaller equipment. In addition to three conveniently placed ladders leading up to the platform on this side, there are two steel ladders leading through fire doors to the basement storage area.

Pick-Up Area

A MOST intriguing feature of the terminal is the fact that the entire pick-up area is completely inclosed, providing a heated storage space 165 ft. long and 55 ft. wide. In addition to the 16 trucks at the dock, there is room for an additional 16 trucks or tractors in front when winter storage is desired. Access to the area is through five 20-ft. doors. Centrally located as indicated on the plan are two gas pumps fitted with 75-ft. power-retracting hose sufficiently long to reach any truck in the area without moving it. While a

Great Volume of Daylight

In both the repair shop and the pick-up area, the observer is at oneo impressed with the great volume of daylight which passes through the 14 x 8-ft. windows which surround him on all sides. White ceilings, light gray upper walls and neutral gray tones below the windows do everything possible to increase the light intensity without a vestige of glare.



wash stand is fitted at the north center of the area, the entire floor is drained to this position. Any truck while loading at the dock, may be washed and fueled and with the help of portable lubricators and oil drums attached to the convenient air line outlets along the dock, may also be completely serviced. "Efficient" is not a descriptive enough adjective to apply.

Lighting and Color

PASSING through the fire wall in the center of the building the visitor finds himself in the repair shop area. But before getting into the details of the area, let us pause for a moment to notice the overall lighting plan of the building. So good, in fact, is the natural lighting that artificial lights in most areas are resorted to only at night. The loading platform itself, however, has somewhat less intensity because of the smaller window space in the overhead doors and the canopy outside. Here fluorescent lighting floods the area.

Unusual daylight is important feature of main shop. Unit rebuild shop is at upper right, parts dept. at top center. Decorations were part of the opening day celebrations.



Minor Repairs While Loading

Around all sides of the platform air, water and electric outlets are located at 20-ft. intervals. In addition, 220 volt, three-way outlets for electric welding are spaced at 40-ft. intervals. Thus, it is possible to check tires and perform minor maintenance operations, including welding, on either trailers or trucks while they are loading at the dock.



Repair Shop

AS WE enter the shop area, which incidentally measures 160 ft. x 62 ft., the unit overhaul section is on the immediate left or northwest corner of the shop. This section, as is the parts department to the right, is separated from the main shop area by wire mesh caging.

Major equipment in the overhaul shop includes a valve refacer and a special valve-job bench containing valve racks, bench grinder and valve seat grinder; a medium-size cold-dip agitated parts cleaner, a drill press, a piston pin hone, a clutch rebuilder, a connecting rod aligner, a large work bench used principally for electrical repairs, a small dip tank for cleaning electrical parts and carburetors, a complete electrical test bench, a distributor analyzer, a universal lath and a brake riveter. Handy also are at least one engine stand, transmission stand and rear end stand. It is at once obvious that the shop figures on doing virtually all its own unit overhauls, and the compact shop is well equipped to do it.

Just outside the overhaul shop will be found a 20-ton arbor press and next an engine run-in stand fitted with a complete set of standard instruments. The company realizes the short comings of breaking-in engines without load and plans soon to install an engine dynamometer in addition to the chassis dynamometer already in on the opposite side. The designers did, however, install flexible exhaust pipes at 20 ft. intervals throughout the shop venting through 4-in. holes in the wall. These flexible metal lines, about 10 ft. long, hang coiled on the wall a foot or two off the floor. Thus no matter where an engine is run, either in or out of the chassis, the exhaust pipe can be quickly atached to any one of the convenient ports.

Beyond the engine stand is a gas pump fitted with one hose on the inside of the building and one on the outside, the latter handling most of the tractor refueling requirements. Alongside is a small opening in the wall through which pass two pressure oil lines, with meters. Oil is metered into the truck, in either of two preselected grades, in exactly the same manner as gasoline is added. The two 1000-gal. underground oil storage tanks are also piped to metering outlets in the lubrication area on the opposite side.

Portable 25-gal. oil drums, periodically refilled from the underground storage tanks, are kept nearby. These may be wheeled to any location in

the shop, pick-up area or parking area for quick, convenient service without moving the trucks. Jockeying is held to an absolute minimum.

Throughout the shop the familiar air, water and electric outlets are noted at 20-ft. intervals with 220-volt outlets at double the spacing. All outlets are about 4 ft. off the floor. In addition there are fire extinguishers at approximately 25-ft. intervals, and overhead is a complete built-in sprinkler system. Also, throughout the shop at intervals too frequent to plot on the plan drawing are numerous fixed and portable work benches with the emphasis on the latter which contain locked compartments for individual mechanics' tools.

Beyond the north door of the shop is an area adapted to general repairs. Two interesting work benches here are specially fitted for particular jobs. One contains all auxiliary equipment for electric welding including a great variety of welding rods; the other is a shop designed unit for ring jobs containing a handy slotted rack for holding piston and rod assemblies.

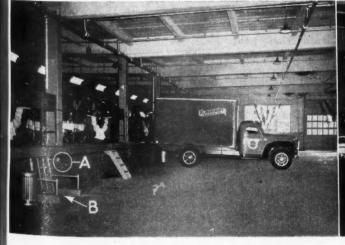
The far northeast corner contains a pressure washer piped to four convenient outlets along the adjacent walls, a large gas-fired steam and vapor parts cleaner, a portable steam cleaner and a storage tank for kerosene.

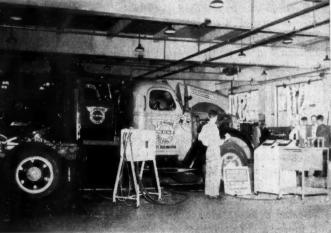
The southeast corner is devoted principally to trailer repairs. Major equipment includes electric and gas welders (there are two of each in the

(TURN TO PAGE 142, PLEASE)

Air, water and electric outlets (A) at 20-ft. intervals and ladder (B) to basement add utility to pick-up truck area. Gas pumps with 75-ft. hose reels are off photo at right

Chassis dynamometer, complete with remote push-button controls, full instrumentation and separate cooling system for truck engine, is shop's most valued equipment item





Truck Accident Causes Suggest Design Remedies

Critical parts such as brakes, tires, steering, lights, require improvement, says ICC, but need for better maintenance also shown

Summary of All Mechanical Defect Accidents, 1941-1945

	Brakos	Tires	Engines	Steering	Lights	Coupling	Springs and Parts	Wheels and Parts	Fuel Lines	Axles and Differentials	Other	Corrected
No. of accidents												
1945	285	203	158	95	60	55	54	55	35	26	146	-1.124
1941-1945	1,235	681	588	387	261	245	54 238	55 237	125	110		
% of total accidents	.,											
1956	24.3	17.3			5.1	4.7	4.6	4.7	3.0			
1941-1945	26.7	14.7	12.7	8.3	5.6	5.3	5.1	5.1	2.7	2.4	11.4	100.0
Property damage per accident												
1945	\$996	\$2,702	\$1,278	\$1,048	\$2,033	\$1,453	\$1,893	\$887	\$1,462	\$1,220	\$1,330	\$1,503
1941-1945	\$1,079	\$2,456	\$1,375	\$1,083	\$1,389	\$1,200	\$1,180	\$1,104	\$1,364	\$1,534	\$1,574	\$1,424
Injuries per accident					2							
1945	0.98									0.96		
1941-1945	0.86	1.85	1.03	1.40	0.61	0.16	1.73	0.80	0.78	0.80	1.06	1.08
Fatalities per accident									- 1-1			
1945	0.046				0.100			0.109		0.077	0.034	0.100
1941-1945	0.060	0.166	0.150	0.034	0.107	0.020	0.050	0.093	0.200	0.100	0.065	0.092

a In 1945, there were 48 accidents caused by 2 or more mechanical defects. These are counted separately in each category but the actual number of accidents due to mechanical defects is given in the corrected total. These 48 accidents caused 6 fatallities, 20 injuries, and \$53,313 property damage.

THERE were 1124 accidents in 1945 due to mechanical failures compared with 1083 for 1944. This is 10.0 per cent of the 11,296 accidents of all types reported to the Interstate Commerce Commission. This percentage is a slight decrease from 1944, although more defect accidents occurred last year than in any prior year. Despite the increase in the number of accidents, injuries dropped from 1392 to 1305 and property damage from \$2,000,100 to \$1,-710,404; fatalities increased from 110 to 111.

Brake defects, always the cause of more accidents than any other

mechanical failure, increased both in number and in per cent; tire failures continue to be the second most frequent cause of accidents. These two defects were involved in 41.6 per cent of all mechanical defect accidents in 1945. Five types of failures (brakes, tires, engines, steering and lights) are responsible for almost two-thirds of the mechanical defect accidents reported.

The accompanying table lists a summary of mechanical defect accidents by number, casualty rates, and property damage per accident by type of defect. This table points out that tire accidents are the most damaging

for property loss and casualty rates.

The accidents in this report are divided into two types: Those in which the vehicles were moving when the accidents happened; and those in which they were stopped due to disablement by a mechanical defect. This latter type is considered as a mechanical defect accident and includes more than 25 per cent of the total. Accidents also are segregated into passenger-carrying and property-carrying operations. Buses were involved in about 20 per cent of the

reported accidents.

Conclusions are drawn which, in brief, point out (1) mechanical defect accidents are increasing yearly: (2) mechanical defect accidents, a a percentage of all accidents, de creased in 1945 after increasing since 1941: (3) mechanical defect accidents are more damaging to propert than the generality of motor carrier accidents, rate about the same as to injuries, and are slightly less severe on a personal casualty rate comparison basis; (4) mechanical defect accidents follow a definitely established pattern from year to year in that the distribution by type of defect is annually quite similar: (5) certain defects (coupling devices, lights, wheels, and axles) are primarily propertycarrying vehicle defects while bus accidents constitute a larger proportion of steering and fuel line failures than of any other types of defects; (6) vehicles stopped due to mechanical defects are the cause of one-fourth of all accidents due to failure of parts; (7) age of the vehicle is not an indication of its mechanical condition; (8) the end of the war had not affected this problem during the short time remaining in 1945; (9) certain types of failures are more likely to occur during different times of the year but winter is the period of greatest over-all danger; (10) brake defects are the cause of more accidents than any other defect; (11) tire accidents have increased rapidly since 1942 probably due to heavy loading but also due to the poor performance of synthetic tires in motor carrier operations; and (12) most defects showed only slight increases in 1945.

ICC Recommendations

FAILURES of parts of motor vehicles are attributable to four major causes: First, poor design; second, (TURN TO PAGE 154, PLEASE)



Nothing's as Perishable as News

LIKE FRESH STRAWBERRIES and sweet corn... news is a perishable that trucks bring to millions today because tomorrow is 24 hours too late. And behind this final delivery of the finished product, other trucks supply a dozen necessary transportation links from pulpwood forest to pressroom.

are e in when se in disfect. as a ini the ated rop-

, in dearly; 3, 25 de sinc accierty rrier is to vere parit acshed t the andeeels, ertys acrtion than (6) nical h of arts; inion; afhort rtain y to the

reatdelents

ac-

ince

ding

ance

rrier

fects

945.

vehi-

ajor

ond,

RNAL

Supplying this vital service ... at

a tempo matching the requirements of the fast-moving publishing industry... is another example of how truck transportation touches the daily lives of everyone.

And as in so many services in

White

which dependability is the basis for preference, White Super Power Trucks are the choice of the leaders. For the new era of distribution efficiency ahead, they offer this and every truck using industry greater opportunities for better public service at less cost than ever before.

THE WHITE MOTOR COMPANY

Cleveland, Ohio, U. S. A.

THE WHITE MOTOR COMPANY OF CANADA, LIMITED Factory at Montreal

FOR MORE THAN 45 YEARS THE GREATEST NAME IN TRUCKS





SAFE

BATTERY STORAGE

in your own garage

free to fleet owners:

HERE'S the best battery news yet for fleet owners of 25 or more trucks: Free loan of the new Goodyear truck battery PowR SavR! This Goodyear exclusive means automatic, safe care of your Goodyear batteries right in your own garage—batteries always at power peak, instantly ready at any hour of the day or night. Sound good? It's terrific! See your Goodyear dealer right now for full details.

PowR SavR, YKL-T.M.'s, The Goodyear T. & R. Co.

Your best NEW battery buy:

* \$1



POWER-FULL

- because it's on constant power charge kept at full power by your Goodyear dealer's PowR SavR

PACKS MORE PUNCH LONGER

-because of its cushioned power construction. Felted Fiberglas mats placed between the plates mean sure starts far longer!

PATTERIES

-for buses, trucks, tractors

GOODFYEAR

THE GREATEST NAME IN RUBBER

Truck and Trailer Production Statistics 1946 DOMESTIC TRUCK FACTORY SALES BY GROSS VEHICLE WEIGHT*

GVW (lb)	January	February	March	April	May	June	July	August	8 Mos.
5,000 and less 5,001-10,000 10,001-14,000 14,001-16,000 16,001-19,500 19,501-26,000 Over 26,000	17,331 3,151 6,713 6,457 1,121 1,950 1,208	11,822 2,783 5,481 3,156 869 1,569 1,028	14,433 1,719 5,012 5,630 325 1,104 872	23,956 4,508 18,098 11,985 1,516 1,547 910	23,122 5,406 13,381 13,819 1,635 1,576 1,008	29,657 4,396 8,266 4,412 1,279 1,309 928	26,610 6,602 17,196 17,351 1,808 1,586 855	30,210 6,072 21,284 16,841 1,324 1,627 925	177,141 34,637 95,431 79,651 9,877 12,268
Total	37,931	26,708	29,095	62,520	59,947	50,247	72,008	78,283	416,739

^{*} Source: Automobile Manufacturers Association.

TRAILER OUTPUT MEETS DEMAND

The Truck-Trailer Industry Advisory Committee has no plans for making an appeal under the price adjustment order which provides amended data on computing the amount of price increase of trailers. Rather, the members of the committee believe that the entire truck-trailer industry should be decontrolled since supply is approximately equal to demand, as evidenced by the production and shipment figures of the Bureau of Census.

Shipments in July were less than those for June, and for the fifth month this year, were less than production.

ALL TRUCK TRAILER BRODUCTIONS

Vans	July	7 Mos.
Insulated	97	759
Refrigerated	44	1.077
Furniture		1,481
All other closed top	2,056	14,111
Open top		858
Total Vans	2,287	18,286
Racks		*
Cattle racks	368	2,460
Stake racks	291	1,867
Total racks	659	4,327
Tanks		.,-=.
Petroleum	155	1.056
Other	83	243
Total Tanks	238	1,299
Pole and Logging		.,
Single Axle	780	2,610
Tandem Axle	98	678
Total	878	3.288
Platforms	1,137	5,659
Low-bed haulers	1,107	5,009
(over 15 ton)	126	1.090
Off-highway	57	312
Dump trailers	37	289
All other trailers	235	1,009
Total—All-Truck		
Trailers	5,654	35,559

CCJ EDITORIAL

(CONTINUED FROM PAGE 35)

discussion at the September meeting of the Motor Truck Committee of the AMA. The committee was interested but felt that it was too early to make a commitment, preferring to wait for more settled conditions.

* *

If the Jubilee is to be held in 1948, the making of plans need not be dependent upon "more settled conditions." There is only one year in which to formulate plans because these should be ready for announcement when user groups hold their anual conventions the latter part of 1947. Tentative plans should be presented at user group meetings which may be held during the summer months of 1947. It is almost a certainty that the reaction of manufacturers will be in direct proportion to the interest displayed by user groups. There is no reason why these should not start the planning immediately.

END (Please resume your reading on P. 36)



TANK, truck and trailer design has come a long way-so has body hardware. To meet such advances, Hansen Commercial Body Hardware has been continually improved and modernized in design.

Basic in its design, Hansen Hardware remains modern for long periods. Very few Hansen designs ever become obsolete, proving their fundamental soundness. This basic soundness is important in both appearance and performance.

If you specify, apply or use Hansen Hardware, you have the definite assurance that it will withstand the most exacting service. Hansen makes a complete line of Locks, Regulators, Hinges and Handles.

Write for folders illustrating and describing Hansen prod-ucts in which you are spe-cially interested.

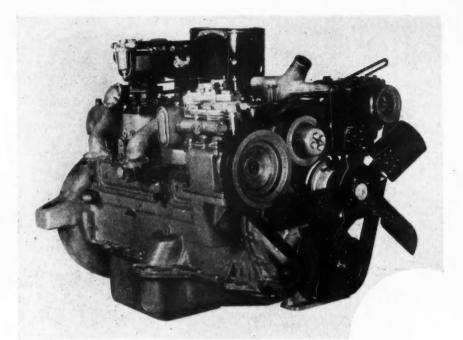


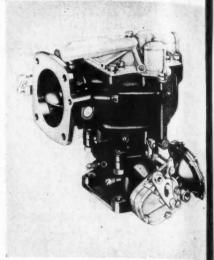
HANSEN

AS MODERN AS THE MOST MODERN BODY

L. HANSEN MFG. CO. 5047 RAVENSWOOD AVE., CHICAGO 40.ILL.

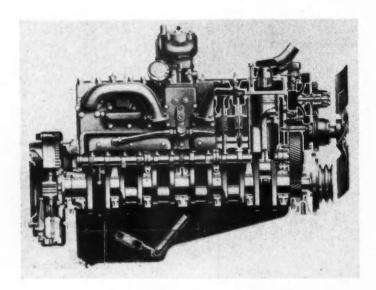
RNAL

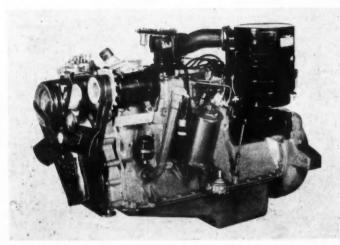




Above. The duplex carburetor assembly as used on the White WB trucks

White Super Power Engines





Upper left. Three-quarter view of the new White engine which features new power and fuel economy

Left. Cut-away view of the engine showing Tocco hardened crankshaft, fourring pistons, pressure cooling and hydraulic valves

Lower left. Three-quarter view of the front left of the new White power plant

FTER a considerable period of preparation, The White Motor Co., Cleveland, Ohio, has announced its postwar, heavy - duty truck program comprising the WB Series of Super Power trucks, and incorporating two new Super Power engines with features of advanced design, new fea-

tures in chassis design, and unique cab design slanted entirely at driver comfort to the fullest extent known to the art.

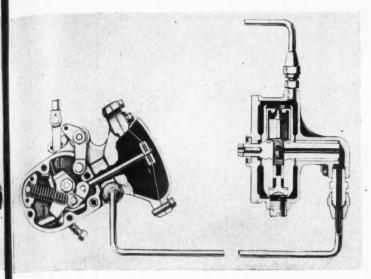
The line consists of eleven models, ranging from the WB-14 rated 14,000 lb. g.v.w. to the WB-3264 rated 50,000 g.v.w. It includes four new models—WB-28 rated 26,000 lb. g.v.w., WB-28T rated 50,000 lb. g.v.w., WB-2864 rated 45,000 lb. g.v.w., and WB-3264 rated 50,000 lb. g.v.w. These four models are powered by two new Super Power engines having the highest output in the company's history. The 260A engine used in the WB-28-28T-2864 Series trucks develops 170 hp., while the 280A used in the WB-3264 develops 184 hp.

The line is rounded out further by the intro-

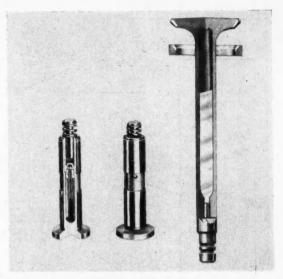
th

sp

00



Cross section of governor and valve assembly. The mechanical device to regulate governor transfers initiative to the vacuum unit



Zero lash hydraulic valve lifters and sodiumcooled, stellite-faced valves are used in the engine

Feature Major Improvements

duction of three 6-wheel and three tractor models, the latter being factory-built models specifically designed for the job.

con-

e pe-

prep-

Vhite

leve-

s an-

post-

duty

gram

e WB

Super

, and

two

ower

fea-

anced

fea-

lesign

fullest

nging

to the

four

z.v.w.,

rated

00 lb.

y two

st out-

engine

ks de-

e WB-

intro-

DURNAL

Before considering the specification details of the two new engines,
it is of interest to point out the major
features of design common to all
White engines in current production.
These may be noted as follows: Stellite-faced, sodium-cooled exhaust
valves; Stellite-faced exhaust valve
inserts; zero-lash hydraulic valve lifters; duplex carburetion with individual cylinder manifold ports; copper-lead engine bearings; Toccohardened crankshaft; bypass cooling
system and positive crankcase ventilation.

The new pressure-cooling system featured on all models is a closed system with pressure held automatically within a narrow range, under 5 lb., includes expansion tanks in the radiator to prevent loss of liquid. This eliminates the need for frequent refilling, permits the use of distilled water or permanent anti-freeze mixtures the year around. It is claimed that pressure cooling, coupled with refinements in the arrangement for cooling the block, and with a corresponding increase in core area has re-



sulted in lower operating temperatures under the most severe service conditions. In fact, it is stated that an improvement of 15 per cent in cooling effect is conservative.

Stemming from military vehicle experience during the war is a new

crankcase ventilating system common to all WB models. It consists of the familiar suction valve connected to the intake manifold which aids in eliminating blowby vapors. In addition they have adopted a more accessible type of air cleaner.

Some refinements have been made in the electrical system including an increase in generator output.

Features of New Engines
CONSIDER now the two new engines. The 260A is L-head, 6-cyl., 43% in. bore x 5 in. stroke, 451 cu.in. displacement, rated 170 hp. at 3000 r.p.m., with 6.25 to 1 compres(TURN TO PAGE 166, PLEASE)

Pressure cooling with water-cooled intake manifolds, new crankcase ventilating system, gear-driven fan, among many changes.

Two new engines develop 170 and 184 hp.

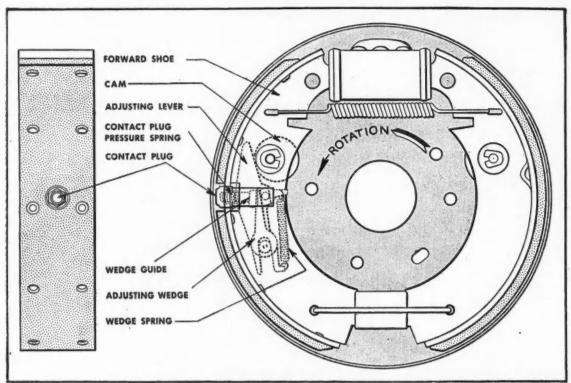


Fig. 1. New Wagner brake showing location and parts of self-adjusting device. Parts in dotted lines are shown in Fig. 2

New Wagner Brake Features Self-Adjustment

Self-centering, self-positioning shoes automatically compensate for lining wear

SELF-ADJUSTMENT and selfcentering of the brakeshoes are new revolutionary features of the improved Wagner Hydraulic Brake, developed by the Wagner Electric Corp., St. Louis, Mo.

In the new brake, conventional brakeshoe anchor pins have been eliminated. The lower ends of the shoes butt against a solid block rigidly attached to the backing plate. The block is machined so that its sides are aligned radially to the axle. Rounded abutments on the lower

ends of the shoes allow the shoes to rock laterally on the block. When the brake is applied, the shoes center themselves by moving radially until they are in their proper position in relation to the drum. This freedom of shoe movement is said to result in maximum braking efficiency. Greater braking effort from a given hydraulic line pressure is said to be achieved through the use of higher mounted anchor points.

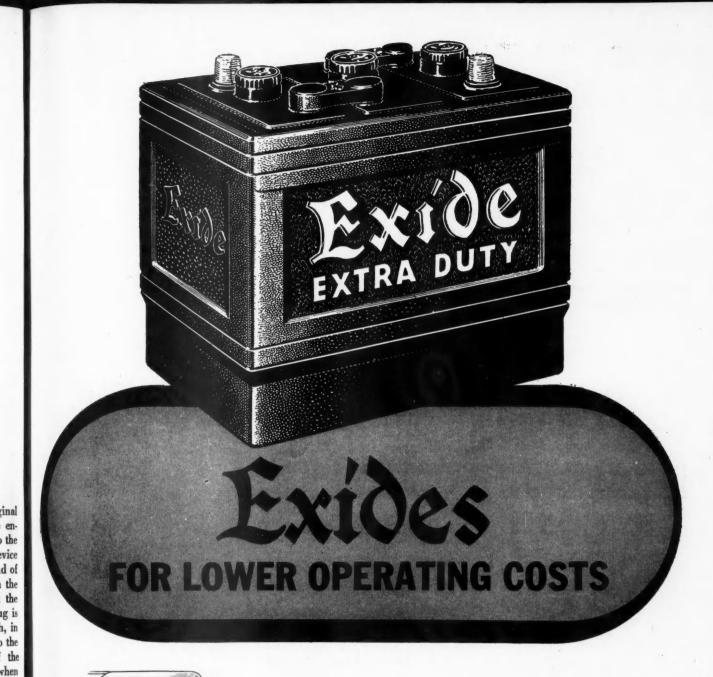
The self-adjustment device automatically compensates for lining wear and virtually maintains the original pedal pad travel throughout the entire life of the lining, according to the manufacturer. Basically the device consists of a contact plug, one end of which extends through a hole in the center of the forward shoe and the lining. The other end of the plug is centrally pinned to a lever which, in turn, is pinned at its lower end to the brakeshoe. The upper end of the lever bears upon the brake cam when the brake is in the released position. A spring-actuated wedge is inserted between the plug-and-lever pin and a wedge guide fastened to the shoe.

The function of the selfadjusting device is to closely maintain constant shoe clearance by advancing the shoe toward the drum as lining wears. The brake cam is adjusted when the brake is installed and no further manual adjustment of the cam is necessary until the shoes need relining.

Operation of the Brake

WITH brake application the shoe is forced against the drum by fluid pressure and carries with it the contact plug which is held in its original position by a spring.

(TURN TO PAGE 74, PLEASE)





upon thousands of trucks, in every type of service, Exides provide daily proof of their greater economy, finer performance, longer life. Both owners and operators have found that Exides cost less per mile of operation, require a minimum of maintenance, and give added months of service.

The extra long-life and greater dependability of Exides are due to Exide engi-

neering and manufacturing skill . . . a result of many years experience in the development of batteries for specific needs. When you buy an Exide, you buy to last ... and you buy to save.



THE ELECTRIC STORAGE BATTERY COMPANY, Philadelphia 32 · Exide Batteries of Canada, Limited, Toronto

en-

tion. erted nd a

sting stant

shoe

The the

rther

nec-

ning.

shoe 1 by

t the

rigi-

RNAL

New Wagner Brake Features Self Adjustment . . . (Continued from page 72)

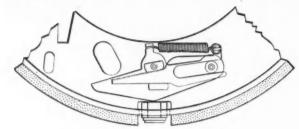


Fig. 2. Detailed view of adjusting wedge showing how the spring accomplishes self adjustment through contact plug

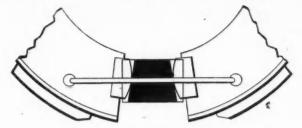


Fig. 3. Self-centering feature showing solid block upon which ends of the shoes rest, giving freedom of movement

Easy-Quick Wash

TRUCKS • TRAILERS • R.R. COACHES
TROLLEYS • BUSSES • AUTOS • BOATS
AIRPLANES • ETC.

JACO FOUNTAIN BRUSHES



- Saves time—cuts labor cost
- Reduces lay-up time
- Cleans surfaces and crevices thoroughly
- O Standard 3/4 hose connection
- 9 Water control valve-push type
- Brush replaceable at low cost
- Style round or oblong
- Quality brushes in horsehair, nylon or bristle

A Shower and Scrub all in one motion with a FOUNTAIN BRUSH is the accepted time saver method to wash trucks, busses, R.R. coaches, trolleys, etc.

The "LACO" FOUNTAIN BRUSH is made to withstand heavy duty use. All parts are made of aluminum alloy—strong but light weight, and rust proof. Brush designed in either oblong or round style with a choice of horsehair, nylon, or bristle brush

Users find the water control valve-push type a time and money saver.

Write today for prices and dealer nearest you.

A. LAITNER & SONS

2000 Brooklyn Ave.,

Detroit 26, Mich.

Brush Manufacturers Since 1855

As lining wear occurs, the contact plug moves the adjusting lever in relation to the wedge guide, allowing the adjusting wedge to advance upward by spring action and thereby taking up the clearance between the plug-and-lever pin and the wedge guide. The wedge holds the lever in its adjusted position in relation to the shoe.

When the brake is released, the adjusting lever resumes contact with the brake cam. This limits shoe return to its original drum clearance. Thus, the shoe has been adjusted an amount equal to the lining wear. This action continues, with the wedge gradually advancing upward until the lining has worn to the point where the contact plug has reached maximum travel, at which time the plug contacts web of the shoe.

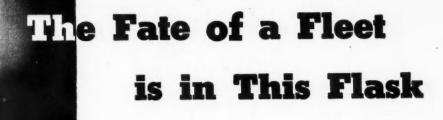
Servicing the Brake

WHEN removing the shoes, place clamp across wheel cylinder boots. Remove anchor return spring. Remove C washers from the shoe adjusting cams. Each shoe is removed by pulling heel of shoe away from anchor block, lifting from backing plate until clear of cam spindle, and then pulling away from wheel cylinder.

In disassembly of the self-adjusting device, remove hairpin cotter keys. Press contact plug inward until plug

(TURN TO PAGE 76, PLEASE)





Hundreds of Fleets Depend on advice

FROM

VALVOLINE FLEET LABORATORY SERVICE

A sample of crankcase drainings from one of your units holds secrets which affect the efficiency and life of your fleet. But, in our laboratory, we read these secrets like a book—evaluate them in the light of your particular operating conditions—translate them for you, into practical suggestions. Hundreds of fleets are using this service to step up efficiency and reduce operating cost.

VALVOLINE FLEET CONTROL LABORATORY SERVICE

Ask the Valvoline man how this service can be obtained FREE

Wire or Write your nearest branch

FREEDOM-VALVOLINE OIL COMPANY

Dept. 41-J

Freedom, Pa.

New York - Washington - Toronto - Pittsburgh - Atlanta Cincinnati - Detroit - Chicago - Los Angeles - Vancouver, B.C. Refineries at Butler and Freedom, Pa.



act

ing

eby the

lge

in

to

ith

re-

ce. an his lge

the ere

xilug

ace ler

ad-

red

ing ind eel

ys. lug

NEW WAGNER BRAKE

(CONTINUED FROM PAGE 74)

contacts web of shoe. Maintain pressure of contact plug while removing wedge tension spring and while withdrawing adjusting lever. Remove wedge, wedge guide, contact plug and contact plug pressure spring.

Best results in brake lining are obtained by using lining sets provided with contact plug clearance holes. When using conventional lining, it is necessary that the contact plug clearance hole be located accurately. This hole should be 3/4 in. in diameter. There should be approximately 1/16 in. clearance between the lining hole and the hole in the shoe.

Parts should be cleaned and inspected for wear or damage before assembly. A new contact plug should be used each time the brakes are relined. The adjusting wedge should be retracted while the contact plug is inserted. The shoe is clamped in a vise so that the jaws of vise are directly beneath and bearing against the adjusting lever to prevent movement of the contact plug. The contact plug should be filed to within .005 in. of the lining surface at this time.

Inspection of Parts

MEASURE distance from end of contact plug to lining surface and file to .005 in. To test wedge action of the self-adjusting device, press end of contact plug while completely retracting the wedge. Release contact plug, then the wedge. Manually push the contact plug inward at the same time noting whether the wedge advances.

To test contact plug pressure spring, depress contact plug, fully retract wedge and hold it in fully retracted position while pressing and releasing contact plug. Worn or defective parts should be replaced when there is failure of either the contact plug pressure spring of the wedge tension spring to function properly.

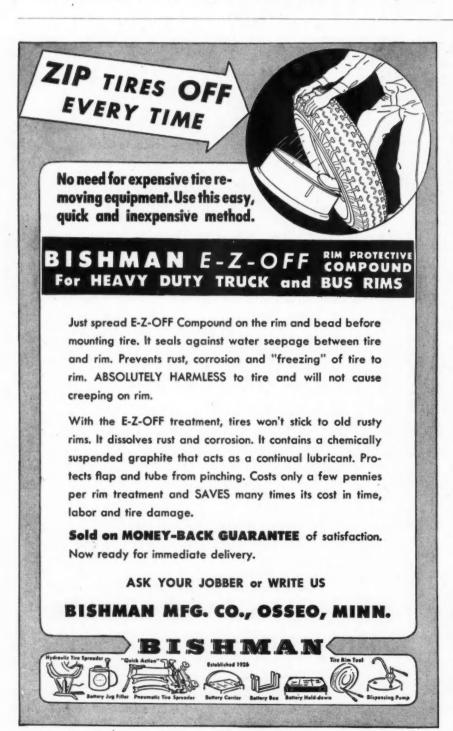
Assembly of the Brake

DO NOT lubricate any part of the brake. Before mounting the shoes upon the backing plate, fully retract adjusting wedge while pressing on the contact plug. Mount shoes. Remove wheel cylinder clamps. Rotate shoe adjusting cams to released position. Approximately centralize shoes.

Initial adjustment is made by manually setting the forward and reverse shoes. Adjust lining clearance by rotating the cam adjustment away from the wheel cylinder with the wrench handle pointed outward. To centralize shoes, drums must be rotated forward while adjusting the forward shoes and backwards while adjusting the rear shoes. Bring each shoe in contact with the drum, then back off until drum turns freely.



Marking the first time a race horse has ridden the skies in order to keep a date with turf fans, Historian, entrant in Hollywood Park's recent \$100,000 Gold Cup race, was flown from Chicago to the Los Angeles airport and whisked to the track by Mack truck







when worn connecting rod bearings cause oil pumping

Smoky exhaust marks the oil pumper and warns that engine bearings are worn and causing excessive oil throw-off. It reaches combustion chambers, burns to motor-fouling carbon on valves, piston rings, pistons and spark plugs and results in sluggish performance. A single worn bearing can oil-starve others, cause costly crankshaft damage.

On oil pumpers always check the engine bearings. If worn, replace with genuine Federal-Mogul Oil-Control Bearings to restore pep, power, economy.

FEDERAL-MOGUL SERVICE • COLDWATER, MICHIGAN
DIVISION OF FEDERAL-MOGUL CORPORATION

Replace With Genuine

FEDERAL-MOGUL

Oil-Control Bearings



dinst veact in.

of

ely act ish me

ire

lly re-

deien act lge ly.

the

lly

es.

sed

ize

by re-

ace

rav

the To

ro-

the

nile ach

hen

date in Gold to

NAL



ccj QUIZ

by ROBERT F. BAHL

Answers on Page 87



Each question of this CCJ Quiz is worth 10 points, and par for the test is 70; anything above that rates a medal. Don't worry, though, if you fail to hit the average. Console yourself by thinking of how much more you have learned about the Interstate Commerce Commission's Safety Regulations. Correct answers are on page 87.

1.

To come within ICC requirements, a truck with brakes on all wheels must be able to stop from 20 m.p.h. within . . .

a. 20 ft.

c. 45 ft.

b. 30 ft.

d. 60 ft.

2

The ICC says that all front clearance lights on a truck should be colored . . .

a. red

c. amber

b. green

d. white



3.

For a tractor and semi-trailer (over 3000 lb. gross weight), what is the minimum number of lights and reflectors that will meet up with ICC requirements?

a. 4

c. 16

b. 8

d. 22

4.

ICC regulations say that a driver must have . . .

a. a state operator's license

b. special ICC driving examination

c. one year's experience in driving motor vehicles

d. five years' driving experience

5.

If your truck were minus one of these, it would not be violating ICC regulations:

a. rear vision mirror

b. direction signaling device

c. stop light

d. windshield wiper



6.

If your truck should become disabled on the highway, you should remember that the ICC requires you to place red flags or flares to the front and to the rear of the truck at a distance of . . .

a. 40 in.

c. 40 vd.

b. 40 ft.

d. 40 paces

7.

The "daily log" required by the ICC is a record of the . . .

a. routes covered

b. loads carried

c. mileage traveled

d. driver's hours

8.

The minimum age for drivers of interstate carriers is . . .

a. 18 yr.

c. 20 yr.

b. 19 yr.

d. 21 yr.

9

Answer "true" or "false" to each of these statements. Two points for each correct answer:

a. ICC requires a physical examination of all new drivers. True or false?

b. All common carriers must come to a full stop at railroad crossings. True or false?

c. ICC requires case-hardened glass for all windshields. True or false?

d. All accident reports made to the ICC are open to public inspection. True or false?

e. The ICC says "No hitch-hikers on trucks." True or false?



10.

Here are 10 items of emergency equipment. Some are mandatory for all trucks under ICC jurisdiction. Some are not. Score yourself one point for each item you check in the proper column.

Item Required Not Required
Fire extinguisher

Fire extinguish Hand axe

Hand axe First aid kit

Spare electric fuse

Spare electric bulb Red flags

Tow chain

Sledge hammer

Flares or lanterns Spare tire





A Studebaker truck, like its reputation, certainly carries a lot of weight

MUCH of the nation's pre-war hauling equipment has grown pretty rickety and needs replacement. There's a terrific demand for every new truck that's produced.

Long-headed buyers, however, don't grab impetuously for the first available vehicle. They make sure it's the right size for their needs. And, they're particular about the truck's reputation as well as the payload it will take.

Studebaker provides a yardstick

From Studebaker's great scientific laboratories and 800-acre, million-dollar proving ground comes a crystal-clear picture of how every Studebaker truck will function—plus the assurance that its gas, oil and maintenance costs will be gratifyingly low.

More and more cost-conscious business men seem to prefer Studebaker trucks because of this thorough pretesting. It saves truck buyers a lot of

expensive experimenting on their own account. And it certainly provides a reliable yardstick by which to measure the merit of any truck.

Studebaker success covers 94 years Studebaker's reputation for trustworthy transportation vehicles began in the middle of the last century.

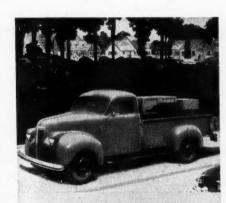
In the war just finished, more than 200,000 heavy-duty Studebaker military trucks and light-weight Weasel cargo carriers served spectacularly at the fighting fronts.

Today's half-ton, one-ton and larger capacity Studebaker trucks are full-fledged quality team-mates of those war vehicles.

If you can possibly do so, hold out until your dealer gets the new Studebaker truck you want.

STUDEBAKER

Builder of trucks you can trust ©1946, The Studebaker Corp'n, South Bend 27, Indiana, U. S. A.



Product of brilliant engineering and painstaking craftsmanship!

—Like all Studebaker trucks, this one-ton pick-up is enduringly built by conscientious craftsmen, many of them fathers and sons. It's powered by Studebaker's amazing Econ-o-miser engine of wartime Weasel fame. Studebaker's sturdy Hy-mileage engine is used in the heavy-duty-model truck that's pictured at top of page.

n.

New Truck Registrations by Makes and States*

		Auto- car	Brock- way	Chev- rolet	Dia- mond T	Divco	Dodge	Fed- eral	Ford	FWD	GMC	Hud- son	Inter- nat- ional	Mack	Piy- mouth	Reo	Ster- ling	Stude- baker	White	Willys	All Others	1
abama	uly Mos.	3		554		6	131	3	143		45	1	188	4		33		36	13	88		
	Mos.	18	1	1709 127	35	27	1088	52	1320 47		159	22	941 29	90	1	143		145	75 2	399 31	80	1
\7	Mos.	4		318 218	6	7	241 68	8	380 51		29	6	170 88	15		26 3		36 13	27	149	21	1
(7	Mos.	1 40	5	1463 975	26 11	38	791 575	20 18	1987 280	6	131 181	8 33	588 402	20 13		11 53	3	103 285	22 40	170 489	2 48	1
\7	Mos.	218	17	3011	104	138	3727 90	95	3713	24	714	132	2058	107		246	72	893	300	2423 33	328	11
19 T	Mos.	24		164 686	31	15	537	15	113 708	25	13 64	7	416	7		5 28		18 88	51	145		1
nnecticut	Mos.	17 52	5 23	169 482	16	28	92 346	35	40 216	3	12 55 11	15	65 231	43		14	6	19 83 22	57	208	7	
olaware	Mos.	24	1 6	69 190	6	2	21 155		15 160		11 27	1 4	20 107	8		13		22 55	9	6 48	5	
st. of Col	uly Mos.	7	19	87 216	9	37	24 141	3 8	21 161		6	1	28 121	1 7		12 68		6 21	30	3 59		
oridaJ	uly Mos.	6	1	236 882	1		72	2	88	1	22 229	5 5	71	4	1	20		20	3	36 355	5 2	
	uly Mos.	35		522	36	26	950 194	32	1783 166		39	17	535 145	197	1	112 35		101 58	76 9	59	20 3 28	1
	Mos.	7		1897 171	33	8	1068 58	24	2009		153 12	18 2 5	777	92		111		253 21	104	316	6	1
17	Mos.	5		400 843	14 14	6 27	290 490	22 15	397 225		41 110	30	209 433	18		23 63	3	77 220	3 26	186	27 13	
(7	Mos.	94	15	3504 449	315	176 12	3272 227	113	3041 123	8	416 23	119	2676 270	144		357 39	3 5	645 133	314	760 89	130	1
[7	Mos.	8	21 79	1561	90	60	1414	61	1180	1	160	58	1327	19		194		564	132	500	15	1
(7	Mos.	4	2	475 1658	98	17	188 1080	12 48	174	1 2	34 144	35	232 1089	62		39 142		79 257	33	95 334	3 4	
ansas	Mos.	5		295 1635	59	14	76 817	31	1084	5	92	20	154 914	20		13 65		33 195	60	124 334	30	
	Mos.	4	1	258 1426	38	13	105 834	32	64 946	1	25 86	17	121 811	1 16		17		30 124	42	333	2	1
ulelana	luly Mos.	16		276 1181	36		136 797	28	90	2	18	1	138	5		19		49 171	11	49 281	10	
aine	luly			233		11	107	5	49	1	17	10	99	44		54		36		38	2	
aryland	Mos.	2 8	10	722 372		22 5	473 93	16	505 63	3	45 31	11 2	310 106	32		10 18	2	93 44	10	132 68	33	
	Mos.	62 67	53 34	1079 519	22	45 25	688	46 12	517 110	3	186 37	15 13	515 282	56 24		95 43	7	126 126	79 42	316	21 5	
	Mos.	251 16	123	1388 462	71	182 15	1349 399	51 22	1365 356	8	101	47 13	800 196	180		176 43	31	260 99	219	241 361	36	
17	Mos.	42	51	1818	56	159	2269	140	2417	3	302	138	1085	41		201		374	97	1518	21	1
	luly Mos.	23	i	508 1412	58	22	201 1207	51	210 1325	12	30 121	8 26	277 1028	80		14 72		85 258	15 78	89 318	39	
	luly Mos.	1		287 1397	24	. 4	151 896	17	131		19 78	6	115 537	28	2	13 43		28 110		58 261	11	1
lesouri	luly 7 Mos.	4	1	280 2976	95	124	118 1926	65	70 2262		18 226	30	140 1156	18		102		305	110	56 550	89	1
ontana	luly 7 Mos.	8		119 390	1 16		64 338	4	23 302	1 2	7 36		60	2		9		35 86	6	29	3 24	1.
ebraska	luly 7 Mos.			250	3	2	82	6	87		9	1	282 137	1		10		36	5	56		
evada	July	2	1	940	81	9	657	31	771	26	82	7	755 10	34		40		140	1	12	5 2	
17	7 Mos.	3	1	116 55	2	1 3	154	6	149	1	25 11	1	71 25	4		1 6	8	28	3	56 25	16	
	July 7 Mos. July	1 48	34	187 454	1	14	162 245	3 24	156 115		19 83	3	78 240	14		18 24		13	4	48	1 3	
	7 Mos.	214	244	1385	90	128	1368	115	1413	7	281 17	60	1011	282		86	8	320	235	697	44	
	July 7 Mos.	1	*****	225 383	18	1	78 262	14	35 210	1 4	42	2	164	21		7		20	24	23	4	
lew York	July 7 Mos.	88 560	142 971	1046 4324	16	31 210	736 4258	47 359	381 3710	53	210 1074	13 114	402 2527	1081	1	353	8	225 766	774	387 1584	38 298	
orth Carolina	July 7 Mos.	13 53	2 4	676 1599	28	3 27	169	9 53	50 1459		64	24	182 710	155		26 98		268	9	85	16	
erth Dakota	July 7 Mos.			115	17	1 3	60 305		27	3	3	1	70			5		20	2	38		
	July	21	1	353 885	11	30	525	29	428 335	3	139	17	438 541	8		26 62		. 233	38	253	15	
klahoma	7 Mos. July	121	37	2961 426	155	168	3165 167	196	2411 88	27	385	114	2266	172		398 15		832	3	62	3	
regon	7 Mos. July	7		1288 332	10	20 2 15 9	1053	17	1404	12 4 6	92 92 22	14	749 115	17		56 11	3	119	57	278 11	6	1
ennsylvania	July 7 Mos.	9	61	701 1019	43	15	619 617	36 42	682 170	6	101	14	399 490	52 10		43 76	13	114	54	100	24	
hode Island	July Mes.	315	372	3246	217	67	3672	216	2486	5	407	99	2536	403		407	70	817	430	1 1 820	103	
node Island	July 7 Mos.	13 82 1	3	65 324	12	34	42 259	4 2	18 214		19	3		3		10	5	10	22	20 81 44 248 36	9 4	
	July 7 Mos.	11	1	386 1124	12	6	701	15	933		13	15	72 352	49		22 81		258	59	248	9	
euth Dakota	July 7 Mos.	3		129	35		0.7		29 265	2	75 7 29 43	1 3	68 332			25		14		. 36	1	
ennessee	July 7 Mos.	4		379 2265	29	5 2 20 3 29	128	14	131	1	189	1	102	3		7		. 41	10	11		
exas	July 7 Mos.	1 3		1471	1	3	1451 644 3686	14	1947 549		. 128	10	554	11		. 47		188	82	207	52	
tah	July		3	5172 106	122	. 4	3686	81	5033		416		. 31	94	1	158		. 598	352	. 13	1 4	11
1	July 7 Mos. July	1		320 47	15	8	41	95 14 81 3 19	320 25 270 127	8	45	5	194	7		2	1	51	12	80	22	
	July 7 Mos.	21	9	255 780	5	2	248 227				10 24 22 111 27	5	162	18	1	28		. 3	7 4	1 151	6	
	July 7 Mos.	80	23	1401	40	44	876	44	1257	4	111	17	203 588	62		26 19 62 17		121	88	3 349	18	
Vaehington	July 7 Mos.	7 2		401 916	56	37	189 776	16	58 830		. 83	25	659	32		. 42	1 12	23	9 42	32	37	1
Veet Virginia	July 7 Mos.	15	8	202 622		. 4	104 648	47	62 662	11	36	3	50	2		12		. 20	8 4	1 49	1 9	
Visconsin	July 7 Mos.	1 12	1	544 1381	33 7 89	8	177	13	116	6	29	8	219	3		28	1	6	0 14	4 98	3 9	
Wyoming	July 7 Mos.			. 79			. 48	1	1173		. 3	1 1	96			. 1		. 1	11 1	1 34		
1	/ MOS.	1		. 264	19	4	190	3	212	8	14	2	135	1		. 18			8 12	2 85	5 8	1

^{•-}Data, R. L. Polk and Co.



but you can still have all the advantages of S Truck Bodies

Does your business require truck bodies of any special design? Do your particular requirements call for an individualized style? You can get exactly what you need from your Ls Jim-your Ls Body Builder.

He has experience in your field. He has the know-how to meet your design requirements. And, he can build into your truck body all the basic advantages of Lindsay

Structure: lightness, great strength, durability, all-metal construction, ease of repair, low over-all operating costs.

LS service is nationwide, and there is a Lindsay Body Builder near you. Ask him today about your next truck body. Write to The Lindsay Corporation, 1724 25th Ave., Melrose Park, III. Sales Offices: Chicago, New York, Atlanta, San Francisco, Montreal.



S LINDSAY STRUCTURE

DISTRIBUTORS AND DEALERS THROUGHOUT THE COUNTRY



Trucks Undaunted by A-Bomb . . . New Record Despite Shortages . . . But Supply Remains Acute

ICC Bogged Down on Safety . . . Also Considers Glass Code . . . Present Prices Should Stick

Trucks Take A-Bomb Blast

In the event of atomic warfare, the trucking industry will not be faced with the loss of their fleets, provided they follow the dispersed tactics learned by the Army during the last war and, of course, provided none of the fleets suffer a direct hit.

At least, this is the first conclusion that can be drawn from preliminary Army Ordnance reports on the effect of the first atomic bomb test on military cargo trucks aboard ships in Bikini Atoll. (See earlier bomb test story, CCJ, June, 1946, P. 78.)

Interested primarily in the first bomb burst—detonated in the air—Ordnance officers conducted an on-the-spot inspection as soon after the test as it was safe to enter the area. In brief, their report covers the following points, revealed exclusively to CCI:

1. The vehicles received only light primary damage, consisting mainly of dents and paint burns.

2. They were all in first-class operating condition.

3. Perhaps most important is the fact that the electrical systems did not suffer from radiation.

4. The vehicles received had secondary damage from falling portions of the ships' structures, but not from the bomb itself.

None of the Ordnance equipment was lost, except that placed on ships which sank. At the time of this writing, the vehicles were still in transit to the United States, where they will undergo further inspection and testing at Aberdeen Proving Ground, Aberdeen, Md.

New Record Despite Shortages

During August, truck producers, faced with material shortages that would try the patience of a Job, buckled down and achieved a new record for commercial trucks in turning out 105,506 units.

In all categories except light-heavies the industry recorded substantial gains, with the biggest increases in lights and medi-

by GENE HARDY CCJ Washington Bureau

ums. The return to production of Diamond T and White is expected to result in a bettering of the situation in the heavier models.

For September, the industry is forecasting production of 116,762 units, slightly lower than the August forecast of 124,687 units. CPA Automotive Division Director John Graham said on Sept. 20 that the industry will meet its September schedule unless "unforeseen shortages occur which do not seem probable at this moment."

August production was as follows:

	Actual Production	Industry	Percentage of Forecast Achieved
Light-heavy	3,317	8,108	40.9
Light	43,614	53,818	81.0
Medium	57,052	60,107	94.9
Heavy-heavy	1,523	2,654	57.4
Total	105,506	124,687	84.6

During the month passenger car output also touched a new post-war record of 241.302 units.

... But Supply Still Tight

The shortages deviling the industry are the old ones of steel, castings, lead, copper,

These shortages are being overcome by the industry, despite constant blockades erected by the government, such as the subsidization of pig iron for housing items. Reinstitution of priority ratings for iron and steel by CPA was supposed to be a boon to the industry and its suppliers. However, CPA is denying practically all applications for such ratings.

OPA refusal to raise ceilings on copper. lead and zinc only prolongs the critical situation in these metals.

These supply problems are not exclu-

sively the property of the truck industry, but affect all automotive producers.

Then, too, for the first time since the end of the war, materials quality is being openly criticized by Washington sources. It is reported that steel supplies are not up to usual standards, resulting in considerable wastage. The reasons given for this development are poor workmanship and the necessity of buying from sources other than regular suppliers.

ICC Bogged Down on Safety

Revision of the ICC motor carrier safety regulations is coming along very slowly. The Section of Safety expected to have the original draft ready by this time, but it does not appear likely that it will be ironed out before the first of the year.

Behind the delay are the endless meetings and conferences which require the attendance of the men working on the revision. These meetings resulted largely from the work of the President's Highway Safety Conference and the Interdepartmental Committee on Safety.

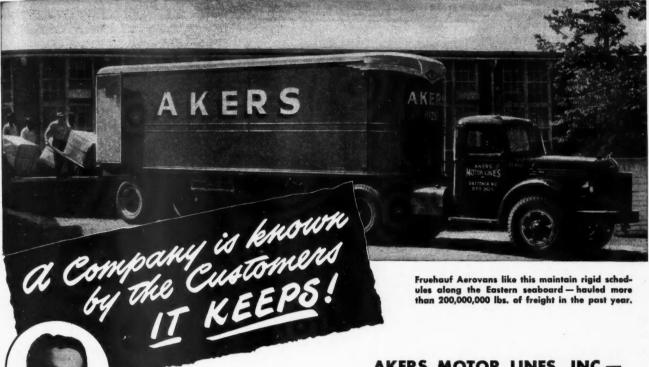
While work has progressed satisfactorily on several sections, ICC will not do the job piecemeal and nothing will be issued until the overall revision is ready.

. . . Also Considers Glass Code

ICC is also leading the way on revision of the present safety glass restrictions. The American Standards Association Code for Safety Glass has been a part of the regulation since 1938. This revision, not due for at least a year, will take into account all new developments, including plastics and new methods of construction, to bring the code up to date.

Present Prices Should Stick

Most truck prices are expected to remain unchanged until OPA expires. The price schedules issued under MPR 610 cover practically all allowances OPA is (TURN TO PAGE 84, PLEASE)



than 200,000,000 lbs. of freight in the past year.

AKERS MOTOR LINES, INC .-156 Trailers...In 13 Years...

100% Fruehauf!

3 Brothers manage this operation serving 13 states. W. W. Akers, Jr., Pres. (left); John M. Akers, Vice-Pres., General Manager; C. S. Akers, Vice-President.

"We've found it profitable in many ways, to standardize on Fruehauf", says W. W. Akers, Jr., President. "Service is a major factor. The accessibility of parts and Fruehauf Factory Branch Service along our routes were life-savers during war-time shortages. With only Fruehaufs in our fleet, our terminal mechanics need only familiarize themselves with one make Trailer — another operating saving."

HERE'S A FIRM that's come a long way with capable management, hard work and a fleet of Fruehauf Trailers.

From a very modest start with one truck in 1933, the Akers Motor Lines has built its fleet to 156 Trailersall Fruehauf - plus 175 trucks and tractors. The company-owned Trailers are augmented by 8 additional units, under permanent lease, to handle overflow business.



WASHINGTON RUNAROUND

(CONTINUED FROM PAGE 82)

required to make. Unlike passenger car producers, the truck industry has reached a point in production where no claims for higher prices on the basis of low volume could be made.

Price controls have been suspended on trucks of 30,000 lb. g.v.w. and over. Similar action on additional trucks is expected. Under discussion is the possibility of suspending ceilings on all trucks of 16,000 lb. g.v.w. and over.

Trailer Output Rising

Truck-trailer manufacturers would not surprise official Washington if they turned out from 6000 to 7000 units each month during the last quarter of this year. The latest census report shows that 5966 units were made in July, an increase of 19 per cent over the 5033 units produced in June, thus reversing the downward movement of May and June. July production was still 11 per cent below the 6691 high for the year established in April.

The industry is now petitioning OPA for decontrol of all truck trailer prices on the grounds that supply and demand are approximately in balance. Production, shipments and additions to inventory appear to bear out the industry position. Early action by OPA seems likely since the OPA extension law specifically directs the agency to lift controls when supply and demand are in approximate balance, including inventory requirements.

New Transport Dept. Dubious

The Senate Small Business Committee Report (see page 90) recommending a complete overhauling of the national transportation policy and the eventual creation of a Department of Transportation with a cabinet officer at its head can be largely disregarded.

In an election year, Congressional solicitude for small business is astounding, and this committee has been issuing reports on various segments of the company with amazing rapidity. All of them profess the most tender sentiment for small business.

Actually, the transportation report is largely a repetition of a report made two years ago by the defunct Board of Investigation and Research about which Congress did nothing except to let it gather dust. The Senate report was prepared by C. E. Childe, a former member of the old BIR.

Batteries Tighter Than Ever

Battery production continues on a touchand-go basis. Batteries will be tighter than ever in the fourth quarter. While there has been some talk of shipping new vehicles without batteries, CPA says this is not an immediate possibility. In fact, during a trip to Detroit, CPA's Jack Graham assured the industry that CPA would allocate enough lead for batteries for original equipment, even though replacement production might have to suffer.

CPA is also expected to permit battery producers to carry over portions of unused quarterly lead allotments into succeeding quarters. This plan would permit manufacturers to utilize more fully their permitted quantities of lead. For example, manufacturers were permitted to use approximately 58,000 tons of lead in the third quarter but were able to obtain only about 54,000 tons.

While the battery manufacturers may expect a better delivery of authorized lead usage during the fourth quarter than they were able to obtain in the third quarter, nevertheless, in terms of lead tonnage allocated it may not exceed the third quarter permitted usage. Demand for lead for all uses is about one-fourth again as much as estimated annual production.

IF OPA ceilings were lifted and subsidies wiped out, the situation would improve greatly and would result in the mining of higher-grade ores. Neither are the OPA prices conducive to the collection of scrap. It is reported that very little scrap is coming in, other than that collected by the battery manufacturer amounting to about 87 per cent of their usage, for which they receive no extra credit when allocations are made.

(TURN TO PAGE 210, PLEASE)





Can you add 17 years +33 trucks + millions of miles? ... it's DIAMOND T reliability

OPERATORS who haul for others must be doubly critical of their trucks. Their profits depend on it.

Elgin Storage and Transfer Co. bought their first two Diamond T's in 1929. This Model 509SC is the newest of 33 Diamond T's they now own. Ten of these have gone over a third of a million miles each and "maintenance cost has been practically negligible."

Herbert C. Muntz, president, writes of the 509SC, "Ideal for local pick-up and delivery. We can haul light loads without excessive operating cost, heavy loads

without being overloaded, and maneuver a 15-foot body in the tightest places. Favorable weight distribution results in unbelievable tire mileage."

New and improved Diamond T commercial trucks are in production now and Diamond T research and pioneering continue. Diamond T leadership is equally outstanding in models available now and in the designs for tomorrow. See your Diamond T dealer.

DIAMOND T MOTOR CAR CO. CHICAGO

Established 1905



oer

inhe of

DIAMOND T TRUCKS

Before Buying New Equipment READ THIS BOOKLET

A File Size
Booklet of
Information
About the
SAFER—more
ECONOMICAL
Emergency
Brake

BRARES

"Equipped with Tru-Stop Emergency Brakes" means a better, safer truck or bus. This 12-page booklet tells you why. When you read it, you will understand why fleet owners who have once used TRU-STOPS make sure that new equipment is TRU-STOP equipped. For your copy of this booklet, write our Detroit office.



6-235 General Motors Bldg., Detroit 2 · 695 Bryant Street, San Francisco 7 · Bridgeport, Conn.

AMERICAN CHAIN & CABLE

In Business for Your Safety

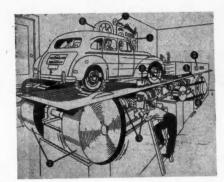
QUIZ ANSWERS

CCJ Quiz on p. 78

- 1. b. Within 30 ft., or it must be able to decelerate at the rate of 14 ft. per second.
- 2. c. "Forever amber." Rear clearance lights must be red.
- 3. d. Twenty-two. On the tractor—two head lamps, two amber front clearance lights, one tail lamp and one stop light; on the semi-trailer—two amber clearance lights, two amber side-marker lamps toward the front (one on each side), two amber reflectors near the front (one on each side), two red side-marker lamps toward the rear (one on each side), two reflectors near the rear (one on each side), two red reflectors on the rear, one tail lamp and one stop light.
- 4. c. The requirement is experience in driving some type of motor vehicle for not less than one year, including experience throughout all four seasons.
- 5. b. ICC has no requirement on directional signaling devices.
- 6. d. Forty paces, which is approximately 100 ft.
- 7. d. The daily log is a personal record of the individual driver's entire duty period. It shows all time off duty or on duty. It is not a vehicle record.
- 8. d. Twenty-one years is regularly the age minimum. Certain exceptions are made to permit a farmer to use an operator between 18 and 21, under specified conditions.
 - 9. a. True.
 - False. This applies only to buses and vehicles carrying explosives, inflammables, poisons, etc.
 - c. False. In fact, case-hardened glass is expressly prohibited on new vehicles or replacements.
 - d. False. They are confidential and not open to general inspection.
 - e. True.

10. Required—fire extinguisher, spare electric fuse, spare electric bulb, red flags, flares or lanterns.

END
(Please resume your reading on P. 80)



The surprising decision to take most of its testmen off the road and have them do their driving inside a laboratory, has resulted in more accurate road tests for the Gulf Oil Corp. This greater accuracy is secured by an engineering development christened the road test dynamometer, which eliminates all the ordinary uncertainties of motoring, while the basic factors computed in gasoline testing are retained. The dynamometer, a machine rivaling a Rube Goldberg creation in apparent complexity, creates a "dream highway," where actual driving conditions — except for traffic jams, scenery, chickens and some kind of weather—can be created by pushing a button.



Regardless of whether you make short or long hauls, carry light or heavy loads, drive at low or high speeds, you can keep your fleet fit for service with NIEHOFF Products.

30 years of manufacturing experience, the engineering of all NIEHOFF parts to standard industrial tolerances or better, plus a rigid inspection at the factory—guarantees quality and performance.

Each NIEHOFF part is attractively packaged and plainly marked for quick, easy identification. One simplified catalog with a single code for all major ignition systems speeds up ordering and service.

Ask your Jobber for NIEHOFF Products today.

C. E. NIEHOFF & CO.

4925 Lawrence Ave., Chicago 30, III. BRANCHES: 1342 S. Flower St., Los Angeles 15, Calif.



NIEHOFF

APPROVED QUALITY PRODUCTS



Fleetmen Search Buried Costs . . . Put Emphasis on "O.S.&D." . . . An Eye on Competition . . . Weigh All Cost Factors . . . Output Should Climb Slowly . . . Materials Biggest Headache . . . Scrap Drive Is On

Fleetmen Search Buried Costs

With freight rates tightly controlled by the ICC, truck operators are coming more and more to realize that their margin of profit is definitely related more to holding costs down than to getting rates lifted. While many operators are and have been watching obvious operational costs closely, there is in added interest evident in some of the more elusive expenses buried in the business departments. That was apparent from the time and study given to business operations at the Michigan Trucking Association annual meeting Sept. 13 and 14

... Put Emphasis on "OS&D"

Claims, for example, arising from loss, damage, or pilferage constitute a sizable cost item. It is a cost that can be greatly minimized by proper handling, labeling, and security procedures and by cooperative action among drivers, dock workers, and the truck line and shipper involved. The problem is a big one that is gaining considerable recognition in the industry, and some national claims groups with paid employees already are functioning. In Detroit, recently a group of shippers held a clinic dealing with better packaging and invited trucking industry representatives to sit in. Many operators believe that by working out a good packaging program with the shipper, claims for damaged freight can be greatly reduced.

... An Eye on Competition

Another business problem, not directly related to costs, but certainly tied in with future profits, is that of development of future business. There is some concern among fleet operators about the intense competition in the transportation field that is sure to crop out in the next few years. They are well aware of the efforts of the railroads to strengthen their position by use of new and modern equipment, improved roadbeds, faster schedules, and reduced rates—all of which means a deter-

by LEN WESTRATE

CCJ Detroit News Editor

mined bid to cut in on the share of the hauling business held by the trucking industry. Also, another new competitor has come on the scene, the freight airline. While this is as yet a relatively high cost operation, its inroads in the perishable goods field cannot be ignored at the present, and with further development it may prove to be a worthy competitor in the movement of durable goods in the future.

. . . And Weigh All Cost Factors

L. F. Van Nortwick, director of truck sales for Dodge, told the MTA convention that truck operators could strengthen their own position by use of new and efficient equipment of the best type for the particular job, by increasing labor efficiency through use of equipment which lessens fatigue, improves comfort, and assures safety, by teaching drivers better public relations and more efficient handling of vehicles, and by cooperative effort to promote better highways and bridges. Michigan operators already have definite plans to bring to the attention of the legislature and the state highway department the need for wide bridges and proper highway construction. The loss in revenue during the spring breakup when load restric-tions force only partial loads is considerable. It is hoped that future highway projects will include the kind of construction that will permit full loads to be carried the year around.

Output Should Climb Slowly

The overall truck production situation for the months ahead looks good but not spectacular. Truck builders here think that schedules will continue to climb in the next few months, but that there will be setbacks from time to time. That actually is what happened in September at Dodge, Chevrolet and GMC. From a high of 9326 trucks in the last week of August, Chevrolet dropped to fewer than 5000 the first week in September, which was due principally to the Labor Day holiday and high absenteeism the following day. However, the following week, production climbed to 7700, but this was still far short of the mark set in August. GMC was even worse off, dropping from more than 1300 a week at the end of August to 382 at the end of the second week in September. That was due to a virtual shutdown of the plant because of a shortage of critical sheet steel for cabs. Dodge also had its troubles when its plant was closed by a wildcat strike over the discharge of one workman. Ford is about the only major producer in Detroit that has been able to step up production, so it is certain that September truck production figures are not going to show any increase worth talking about over August. None the less, the present troubles are not of long range caliber, and barring any serious widespread wave of strikes, truck output should hold up and make a moderate gain for the rest of this year. No company, however, now thinks it can hit anything like peak production for many months.

Materials Biggest Headache

Up to now the biggest problem has been strikes in the plants of parts suppliers, but now it will be a shortage of basic raw materials. Lead is particularly short, and some companies have been considering shipping their products without batteries, leaving the prospective buyer or the dealer to find one. That has not been necessary yet, however, and there is some prospect of government action to increase the supply from abroad. Steel is another very critical item which is going to hold back production for many months. In fact the scrap shortage is so bad that automotive manufacturers are organizing scrap

(TURN TO PAGE 208, PLEASE)



Al Gears of Frogress

This month Union Metal observes two score years of progressive service in American industrial life. These years have been marked by achievement through fidelity to an original ideal . . . the designing, engineering and production of quality steel products.

This translation of an ideal into tangible, useful products finds . . . tall, graceful poles lighting America's streets, making nighttime travel safer; sportsfield lighting bringing nighttime recreation and pleasure to millions; cargo booms loading and unloading ships speedily and safely; Monotube piles providing sound, dependable foundations for buildings and bridges; fluted architectural columns adding beauty to homes and public buildings; materials handling equipment speeding production in industrial plants . . . each contributing towards higher living and working standards.

Today, Union Metal looks forward confidently to further development . . . and to serving America better.

Street Lighting Standards Monotube Tapered Piles Highway Lighting Poles Power Distribution Poles Materials Handling Equipment Floodlighting Poles Cargo Booms and Masts Sign Standards Hoobler Trailer Undercarriages Architectural Columns

THE UNION METAL MANUFACTURING COMPANY

CANTON 5, OHIO

Craftsmen in Steel Fabrication

Senate Sub-Committee Recommends Overhaul of Transport Policy

Complete overhauling of the national transportation policy, looking eventually to the creation of a Department of Transportation, with a Cabinet officer at its head, has been recommended by Senator Tom Stewart's Subcommittee on Transportation of the Senate Small Business Committee.

For immediate consideration, the subcommittee lays down a program involving amendments of the existing transportation policy so as to require that all rates and charges for transportation services shall be "reasonably related to the cost of performing the service economically and efficiently." Rates and charges, it is stipulated, shall in the new policy be "free from all discriminatory inequalities," and shall be "made applicable over all routes and for all classes of transportation services needed by shippers." Removal of governmental restrictions upon carriers which increase the cost of this service is included among the recommendations.

Senator Stewart, of Tennessee, chairman,

has as his associates on the subcommittee, Senator James E. Murray, of Montana, and Senator Kenneth S. Wherry, of Nebraska.

Ten major proposals are set up in the report which is entitled, "Transportation Program for Small Business." Its preparation was the work of C. E. Childe, transportation consultant for the Senate Small Business Committee, who was a member of the Board of Investigation and Research, created in 1940 to investigate the relative economy and fitness of the railroads, motor carriers and water carriers, and methods of effectuating the national transportation policy.

"The report is being distributed at this time," said Senator Stewart, "with a view to focusing public attention on the matters discussed, in the hope that comments and criticisms elicited from its contents will be of value when transportation legislation again comes before Congress for consideration."

Mr. Childe refers to the more important problems affecting small business which involve inequalities of opportunity, including freight-rate and service discrimination against small shippers, producers, farmers, merchants and manufacturers. In this category also are included discrimination against small carriers in competition against railroads and large bus, truck, water and air carriers. A general problem is that of obtaining for all parts of the country the best possible transportation at the lowest possible cost.

The purpose of a Federal Transportation Authority, a National Transportation Advisory Counsel, and an Office of Public Transportation Counsel, as explained by the report, is to develop, inform and present plans and recommendations to effectuate a national transportation policy for an adequate economical coordinated transportation system. In this connection it is stated that general investigations and revisions of the national freight structure, "should be promptly undertaken and expeditiously completed." To this end, the report recommends that the Interstate Commerce Commission shall be reorganized. Carrier taxes should be revised, the report says, and an interstate system of highways should be designed and developed over which interstate commerce may move unhampered by conflicting and discriminatory state restrictions.

The Interstate Commerce Act, it is further recommended, should be amended in such a way as to abolish economic restrictions upon motor and water transportation.

The report expresses the conviction that great economies are possible through modernization and coordination of transportation facilities but opposes large scale consolidation and integration of carriers and their services, "until adequate plans and safeguards are provided in protection of the public interest."

Upon the National Transportation Authority, which would consist of not more than three members would devolve the duty of a continuous study of the transportation needs of the country.



Size

Round

7/16

1/2

5/8

7he Cleveland Hardware & Forging Co.

No. 2406

3264 East 79th St.

CLEVELAND

for

Catalog

22B

Cleveland 4, Ohio



Fifty years ago the Gateway City Transfer
Company set up shop in La Crosse, Wisconsin, with
a small number of horse and mule-drawn wagons. Today
Gateway operates a fleet of 310 vehicles, annually traveling
over six million miles. Cities Service congratulates the Gateway
City Transfer Company upon the distinguished success of
their progressive enterprise. It is our privilege to supply
Gateway exclusively with Cities Service
gasolene and lubricating oils.



CITIES SERVICE : BILLIGLE NAME

Остовен, 1946

Use postage-paid card inserted at page 59 for free information on advertised products



No other truck can match these figures on length of service:

the record shows:

14% of all Mack trucks built up to

1928 are still in service. In other words, every seventh Mack on the road is over 16 years old . . . even though Macks are usually put on the toughest, most wearing jobs. No other truck, regardless of size or capacity, can match this record.

the record shows:

825 out of every 1000 Mack trucks

registered in the years 1929 through 1941 (or better than 9 out of 11) were still in use July 1, 1944.

Compare these figures with those of any other manufacturer, and you'll see that no other truck can match this record!

common sense says:

Length of life is only part of the story.

You want to know how dependably a truck serves as well as how long! That's where the experience of thousands of Mack owners is a valuable guide. They'll tell you that Macks not only last longest; they also work harder, need less maintenance, put in more time on the job and less in the repair shop. That's why a Mack is the biggest money's worth—in work—that your trucking dollars can buy.

*(The basic figures are from the latest authoritative national survey of truck registrations by $R.\ L.\ Polk\ \&\ Co.$)

Mack Trucks, Inc., Empire State Building, New York 1, New York. Factories at Allentown, Pa.; Plainfield, N. J.; New Brunswick, N. J.; Long Island City, N. Y. Factory branches and dealers in all principal cities for service and parts. Mack TRUCKS FOR EVERY PURPOSE



PERFORMANCE COUNTS!

E F CATI

0 9 U T S 6 D C 0 0 D E

NUFACTURERS

f

out decreasing the safety factor signed into the truck.

ditional cost, certain items not conaldered standard equipment. These
isleved standard equipment. These
items are instel below—Model K-3.
and xe listed below—Model K-3.
oversite transmission: Model K-8.
and K-4-F, oversite brakes: Model K-8.
FK-10, oversite engine, transmission and
brakes: Model KR-11, oversite engine
and transmission: Models K-8F and
K-11-F, oversite engine and brakes.

tires, frames or frame reinforcements, optional whochbases or any other units which make up part of the fruck chassis and which Internstional will furnish and approve from the factory as optional equipment can or will change either the

Gear Ratio Range in High-Ratios within the range given are available at no extra cost. Exceptions are noted.

TRACTORS

GEAR RATIO RANGE

ABBREVIATIONS

AND

DEFINITIONS, REFERENCES

ratings, chassis weight shown or per-formance of the truck as indicated by this list.

Also the company reserves the privileges of assigning special gross vehicle ratings for any chassis providing in the opinion of our engineering department, the type of service justifies the new rating with-

(a)—Available with Eaton Two-Speed Axle designated KS Modela. (b) Current models will include, at ad-

Unless given the designation (N)—meaning not available as a tractor—all standard models may be assumed to be available as tractors. Exclusively Tractor models are designated (T).

KEY TO REFERENCES

c.f.—Cab Forward design.
c.o.c.—Cab-Orev-Engine design.
(I)—Diesel-engine equipped.
(T)—Designed for tractor use only.
(C)—Converted Ford or Chevrolet
Model.

(2) International Harvester—Special floations shown propresent only the basic standard chassis units and standard chassis ratings in keeping with definitions established by Commercial Car Journal, Optional units not shown such as engines, clutches, transmissions, axies or axie ratios, brakes, wheels and

W—Worm. 15—Semi-Floating 1—Torque Tube C—Channel.
T—Channel leptred front and rear.
L—Channel reinforced with liner.
B—Channel reinforced with both liner.
P—Channel reinforced with plate.
TL—Channel supered front and rear reinforced with liner.

Gear Ratios (**) Only one ratio.

Drive and Torque H—Hotchkiss (springs).
R—Radius Rods.
L—Parallel Torque Rods
T—Torque Arm. ared front.

The section sidemembers, lined oak inserts.

GOVERNOR STANDARD

Final Drive and Type

B—Bevel. CD—Chain Drive F—Full-floating.

Back of Power Divider. Jackshaft. -Transmission. -Driveshaft.

D—Tru-Stop disk.
I—Internal.
X—Mechanical.
X—External.
PD—Two drums on rear of divider.

DOWER

ot

SRAKES-HAND

Location

A—Air. H—Eydraulie. V—Vacuum. Dp—Duai Primary Operation

·lu.

ed. front, Wagner

rear. heed front, Wisconsin rear.

Own.

(Where a combination of any of the above is used, the first reference mark applies to the front and the second to the rest druns.)

C—Center of double propeller shaft, 2—Rear wheels. 4—Four wheels. 6—Six wheels.

REAR AXLE

MAXIMUM AUTHORIZED TIRE SIZE

The tire size listed in this column is the maximum size recommended by the manufacture of the chassis for the Gross Vebicie Weight for Normal Operating Conditions. It is furnished as extra cost, if til differs from the standard size. Dual rears are understood; exceptions noted. tions, and are based upon the Maximum Authorized Tire Size listed. In actual precision to manufacturer may either increase or decrease the gross vehicle weight rating when either favorable or unfavorable operating conditions are involved. Since the proper performance of a motor twick depends upon many factors, including grades, road conditions, etc, the gracis/weights thats a manufacturer is prepared to recommend will vary with particular conditions, and the

MINIMUM STANDARD WHEELBASE

manufacturer's own standard of safety factors. Specific recommendations, therefore, should be obtained from the manufacturer's representative.

For the express purpose of best fitting the trank to the individual job most of the models listed can be provided with optional engines, transmissions, axies, etc., and these models when so equipped are considered stratch stock models.

Only Domestic Truck Models are listed.

OPTIONAL UNITS

MAKE AND MODEL DEFINITIONS

CHASSIS WEIGHT

The chassis list price applies to the minimus standard wheelbase with standard art lires and standard equipment. All prices are F.O.B. factory. Chassis list price does not include the price of the Cab unless otherwise noted.

CHASSIS LIST PRICE

The minimum standard wheelbase is the so-called standard wheelbase on which the Chassis List Price is based.

MAXIMUM STANDARD WHEELBASE

The maximum standard wheelbase is the extreme end of the standard range of wheelbases offered by the chassis maker. The chassis weight listed includes the weight of the minimum standard wheelbase chassis, with cowl, with standard tires, with standard equipment, with crankces and cooling system full, and T Sgallons of fuel in the tank. If does not exinculate the weight of the Cab. This wapplies to C.O.E. as well as conventional chassis types. Exceptions are noted.

MAXIMUM BRAKE HP.

Maximum Brake Horsepower at Given R.P.M. is actual dynamometer reading without accessories.

The standard tire size listed is that which is included in the Chassis List Price.

STANDARD TIRE SIZE

The Gross Weights published herewith age those supplied by manufacturers as their Recommended Gross Vehicle Weights for Normal Operating Condi-

GROSS VEHICLE WEIGHT FOR NORMAL SERVICE

RECOMMENDED

KEY TO ABBREVIATIONS

ype

ir-Four Wheels, front and rear.

|-Internal.

Location

BRAKES—SERVICE

MAKES—ALL

L—Brown-Lipe.

SRAKE DRUMS

A—Cast alloy iron.
—Cast iron.
—Cast iron.

CI—Copper iron. Material

O-Gunite.

2F—Forward unit of Rear Axie Group.
2R—Rear Unit of Rear Axie Group.
4R—Forward and rear units of Rear
Axie Group.
—All wheels.

WHEELS DRIVEN

KEY

Tw.—Timken-Westinghouse
TW.—Timken-Wistonsin.
W.—Timken-Gaa.
W.—Walteefaa.
W. or W.—Westinghouse.
W.—Westinghouse.

hu-Spicer T or Tim—Timken. Tw—Timken-Westinghouse TW—Timken-Wisdonsin. WG—Warner Gen. —Wattesha.

No.	Type	Letters and the second
PRAME	Side Rail Dimensions	FREEHERE DODOAAAAAAAAA FERHERERERERE BERERER DODOODOODOODOODOODOODOODOOOOOOOOOO
-	C-A Dimensions (Min. Std. W. B.)	900000000 800000000 8000000000 800000000
	Type Hand Location	
so.	Drum Material	######################################
BRAKES	THOUGH THE	1414089888888888888888888888888888888888
BH	Operat'n S	
	Make Location Type	
AXLE	Model	
불공	Make and	
-	Range in High	ウトナインアンドゥ 44のこうからもちもちもちも (1990年) 1990年 1
1	Gear Ratio	
AXLE	Gear and Type	
REAR		
	Make and Modei	Company Comp
_	Forward Sp'ds	本の市の市の市の市の市の
TRANS-		703
MIS	Make and Model	00000000000000000000000000000000000000
_	Governor Standa	NAZIZIZIZIZIZIZIZIZIZIZIZIZIZIZIZIZ 86600444 BEBEBEBEBEBE 000000000000000000000
	Number, Diameter and Length	ANALYS STANDARD CONTROL BY
sy.	Max. Brake H.P. at R.P.M. Given	100 100
DETAILS	Torque lb. fc.	0.000000000000000000000000000000000000
	Displacement Comp. Ratio	UNIONA 44 A 17 UNIONA 40 UNIONA
ENGINE	Bore and Stroke	ANAMAGAGGG GUGGGGGGGGGGGGGGGGGGGGGGGGGGGGG
-	No. of Cylinders,	ಹರದಾರವಾರವಾರವಾರವಾರವಾರವಾರವಾರವಾರವಾರವಾರವಾರವಾರವಾ
	Model	22.555
	Make and	HANDERSERVERVERVERVERVERVERVERVERVERVERVERVERVE
	less noted)	
SIZES	mumiraM Authorized Fig. Size -inu sizu()	82.55.000 11.00000/20 11.0000/20 11.0000/20 11.0000/20 12.000/20 12.000/20 13.0000/20 13.0000/20 13.0
TIRE S	Rest 20	000000=
F	Standard bas strong	Presentation of the property o
	Chassis Weight (See definition)	23.02 23.02 23.02 23.02 25.00 25
elgh ce	Gross Vehicle W	
SE	Maximum Standard	000
BASE	Minimum brabast	000 000 000 000 000 000 000 000 000 00
	Chassle List Price	
		CG250-8F
	MAKE	
	* %	Available Ogg. G.
-	Line Number	

COMMERCIAL CAR JOURNAL.

TWO GOOD REASONS

why the original-equipment leader should be your first choice in Sealed Beam lighting units



-REPLACE WITH GUIDE

	MAKE AND MODEL	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	See Price	WW WW WW WW WW WW WW W
WHEEL	mumi A brabe	
343	Piet Welde Weld	00000000000000000000000000000000000000
-	Mormal Service	CP
TIRE	(normina)	20000000000000000000000000000000000000
SIZES	Databa barata barata barata anumiz con con con con con con con con con con	0 2000 2000 2000 2000 2000 2000 2000 2
	ske and	TITITITITITITITITITITITITITITITITITITI
ENGINE	o, of finders, ore and roke	S
E DETAILS	laplacement omp. Ratio	
AILS	lax. Brake (P. at R.P.M.	44444444444444444444444444444444444444
	lumber, p. 2.	
Dia	digen.	0000
MISSION	Make and Model	NNNNNNNNN NAWAY NNNN NNN NAWAY NNNN NNN NNNN N
88	Forward Sp'ds	######################################
3 1-	Gear and Type	10 10 10 10 10 10 10 10
1	Gear Ratio Range in High	11 12 13 14 15 15 15 15 15 15 15
VALE	Make and Model	Own October
SERVICE	Make Location Type Operat'n	
TICE	Drum Drum	AAAA
86	Material Hand Location	20000000000000000000000000000000000000
. B.)	C-A Dimensi	######################################
	Side Rall Dimensions	Property Pro





Long radiators are designed for the individual cooling requirements of the engines they serve. Capacity, area, number and placement of fins and tubes, cooling characteristics are precisely engineered to maintain engine temperatures of highest operating efficiency . . . 43 years of experience back up every Long radiator for car, truck, bus, and farm machine. LONG MANUFACTURING DIVISION, Borg-Warner Corp., Detroit 12 and Windsor.

auxillary, Spicer 6231B,

Main transmission:

(Turn to Page 98, Please)

CLUTCHES • RADIATORS • OIL COOLERS

	1	Lype		
FRAME		Side Rail Dimensions	THE PARTY OF THE P	
. (ous.	C-A Dimensi (Min. Std. W		
	во	Type Hand Locath	######################################	
		Drum	<u> </u>	FJ12.
BRAKES	3 C	Drum	20222222222222222222222222222222222222	7. I was
BRA	SERVICE	Lining	10022	.50/1 lon, C
	SE	Make Location Type Operation	No.	Front only; Rear 7.50/17. Auxiliary transmission, Own
FRONT		Make and Modei		A Auxillar
ui ui	प्र	Gear Ratio Hange in Hig		cab. 12.00/24.
AXLE	-	Gear and Ty	対対対対対対対対対対対対対対対対対 日日日日日日日日日日日日日日日日日日日日	ok of
REAR	-	-1. par 3009	TOTAL BELLEVIS TO SERVING BOOKS OF THE PARTY	ly: F
R		Forward Sp'o	20000000000000000000000000000000000000	wheel carrier on back of cab.
S.NO	-	,03 ,0000	- 1mm 0000	pare 00/2
TRANS-	spui	Covernor Sta Make and Model		8 86.00 for spare wheel by: Front 11.00/24.
	Main	Number, Diameter and Length		+ Rear only
VIILS	-	Mex. Brake H.P. at R.P.1 Given		ded.
DETAILS	-	Comp. Ratio	00000000000000000000000000000000000000	inelu
	3	Dispiacemen		otal l
ENGINE	_	No. of Cylinders, Bore and Stroke		• Cab and body included. ar 2.406; Total length 5.750
		Make and Model	Own 55C-V8 Own 55C-V8 Own 55C-V8 Own 55C-V8 Own 55C-V8 Own 55C-V8 Own 55V-V8	Own OJ15. +
SIZES	D-dual rear S-single rear	Maximum Authorized Tire Size (Duels un-		mission, Ov nt 2.343; C
TIRE	D-du	Standard Front and Rear	00000000000000000000000000000000000000	Auxiliary transmission,
	341	Chassis Weig (See definition)	### 1995 1995	IA E
olghe	W o	Standard Gross Vehicl for Normal S	######################################	
WHEEL	_	Standard	88888888888888888888888888888888888888	-
WH		Minimum	900000000	Please
	Pric	Chassis List	THESTANDED THE HAND THE TOPING TO SAND THE THEOLOGY AND THE TREE TO SOURCE TO SAND THE TENTED TO SOURCE TO SAND THE TENTED TO SOURCE TO SAND THE TENTED TO SAND THE T	100. PI
		MAKE AND MODEL	Ford Cowl G9C	(Turn to Page 1
	31	Line Numbe	32220000000000000000000000000000000000	£

Ост





● 250 h. p. Walter Snow Fighter mounting front V-Plow and Speed Wings. Clears two lane road with one round trip. Clears at 20-30 m.p.h.

You can't beat blizzards with trucks that are slow-moving while clearing—helpless on slippery surfaces—or stalled by drifts.

You need big, fast, "can't be stopped" Walter Snow Fighters. They have the great power and traction to finish what they start—through the worst snow, drift and ice conditions.

And Walter Snow Fighters finish the job right clean down to the road surface—because properly mounted plows and center scrapers peel off ice and hard-packed snow, without scarring and gouging the road, or damaging the truck,

This combination of power, traction and speed is due to an exclusive drive system—the Walter Four Point Positive Drive. You get full tractive power at all times, on any surface. There is no wheel-spinning to stall your truck. There is no skidding or side-slipping while operating.

Learn about this and many other valuable features that have made Walter Snow Fighters first choice of highway departments throughout the snow belt. Send for detailed literature, today.

CONTRACTORS! BUILDERS!

Work right into the winter with WALTER TRACTOR TRUCKS

With these husky trucks, you laugh at seasons. The Walter Four Point Positive Drive enables them to haul huge loads through snow, soft dirt, mud and over slippery surfaces. Get the full facts on Walter Tractor Trucks. Write today.

WALTER MOTOR TRUCK COMPANY 1001 Irving Ave., Ridgewood 27, Queens, L.I., N.Y.



to Page 100,

L

(86
Page
from
Continued

	3	BASE	Majo	900	TIRE	SIZES	L.	ENGINE		DETAILS				TRANS-	RE	EAR AN	AXLE		AXLE		BRAKES	un	-	(.8	FRAME	
MAKE	olve List Pric	brai	Wehicle W	ormal Serv sis Weight definition)	on bna 1	mum beziron exis -nu el (bezon	pus d	, and bing	acement p. Ratio	ue lb. ft.		ag Teles	bnate Stand	10	ab'q8 braw	edyT bns	e & Torque	Ratio ge in High	bna e	moisi m'sar	Z Zu	100	d Location	Dimension n. Std. W. I	Ilag . anoisne	•
	Chass	Stand	Stand Stand	Сравн	nase inorfi nase	Tire :	Make	No. o Cylin Bore Strok	_		M.P. q.H leviD	Mum Dian and Leng		pow		180D		Rang	MaM boM	Type	Area	Drug Area Drug		C-A	obi2 miQ	qtT
47B 49B 58B		2444	205 224 19500 228 228 22000 228 22000		4900 6.50/20 5950 7.00/20 7100 7.50/20 7490 8.25/20	8.25/20 9.00/20 11.00/20	Wau 6BM Wau 6BZ Wau 6MZA Wau 6MZA	200 2444 2444 2444 2444 2444 2444 2444	262 3185 40455 40455	7175 7210 3300 3300 1300	77-28007 86-30007 105-25007 05-25007	7-2% x10 %	NAKAX	G T9 1 5B330 1 5B430 1 5B430	4Cla R950 5Tim 56400 5Eat 1801 5Eat 2680 5Tim 200V	80 80 80 80 80 80 80 80 80 80 80 80 80 8	R6.37-	7-6.88 Cla 1 3-7.80 Cla 4 -7.16 Tim -8.50 Tim	1 F268 1 450 n 35000 n 35100	144444 144444 1444444	285 408 478 510	512 742 742 990 848 89 990 890 990	44444	22222 22222	8 15x2 %x 36 10x2 %x 36 10x2 %x 36 10x2 %x 36 10x2 %x 36	
38B Studebaker M5 M15A-20 M15A-28					0		Wau deskar Own 1M Own 2M Own 3M	17 17 17 17 17 17 17 17 17 17 17 17 17 1	1706. 1706. 2266.	134	88888		00000	664949 673674 673674 674989	00000	London	HH 65.66 HH 6.66 HH 6.	8.660 8.666 8.666	664307 673625 664452 664452	55353	280 280 280	44 24 24 24 24 24 24 24 24 24 24 24 24 2		-	Sample (grade sales	
Truckstell(C) F18-5 (C) F19-5-0 (C) C18-5-0				4444	00000	000/30	Ford Ford Chevrolet Chevrolet	****** ****** *****	22396 23356 23556 6	95500	100-38003 100-38003 93-31004 93-31004	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Ford	& BL	GOOD BEEN		מומומומו	80000 800000 8000000	rolet	LAHEV LAHEV LAHEV	88888 800000 8000000	610 610 610 610 610	XXEC	655% 657% 6777	4444 4444	TELE
F D D D D D D D D D D D D D D D D D D D					00000000	0000000000	Con B6427 Con 22R Con B6427 Con R6513 Con R6572 Cum HB600 Con R6602 Con R6602	#X#XXXXXX #K####### #G######## %XXXX XX	4276.1 5015.4 4276.1 55135.9 5725.9 6026.2 67217.	28888888888888888888888888888888888888	127- 1148- 1127- 1180- 1198- 1148- 1206- 1206- 150-		X Fu 5A X Fu 5A X Fu 5A X Fu 5A X Fu 5A	65500000000000000000000000000000000000	571m 58415PA 571m 58415PA 571m 8-200P 571m 1200P 571m 1200P 571m 13100P 571m R462W 571m R462W	######################################	**************************************	44444444444444444444444444444444444444	m 35011TW v m 35011TW v m 35011TW v m 26458W v m 26458W v m 26458W v m 23100W v m F3100W v	W84A W84A W84A W84A W84A W84A W84A	600 600 673 750 750 750 750 750 750 627	928 928 0318 031 0329 0229 0229	MANAMANA	\$0000000000000000000000000000000000000	9% x3x x 9% x3x x 10x3x x 10x3	
Wheel-Drive	::::	0000	Opt 22000 Opt 22000 Opt 25000 Opt 25000	8888	8.25/20 9.00/20 10.00/22 11.00/22		Con M6330 Con B6371 Con R6513 Con R6602	#*** *488 ***	330 371 5135 602 6.	77.240 94200 04600 11000	00000	7-2% 7-2% 7-3% 1-3% 1-4 1-4 1-4 1-4 1-4 1-4 1-4 1-4 1-4 1-4	XXXX Frank	5A43 5A62 5A62	5Tm 56410H 5Tm R2090H 5Tim R3100W 5Tim R462W		****	8.00000 8.00000 8.000000000000000000000	F35H F2090H F3100W	LAIHV LAIHV WS4IA WS4IA		578 868 a 1030 a	2222	00pt 00pt	× HH	
MDX HR HG HG 800 SU1		8 4 4 4 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	128 8700 156 17000 158 20000 182 25000 182 28000 182 28000	\$8050 1057 1057 1057	7.50/16 3.25/20D 3.00/20 3.00/20 11.00/20D 12.00/20D	.00/168 0.00/20 0.00/20 0.00/20 0.00/20 0.00/20	Own T-137 Wau BZ Wau MZA Wau MZA Wau SRKR Wau SRKR Wau SRKR	0 000000 2 111110 2 122222 1 2111001	230 6 820 6 820 6 820 7 779 6 779 6 779 6	185 282 282 283 283 283 283 283 283 283 283	94-3200 95-2800 129-2800 129-2800 129-2800 126-2400 126-2	4-2 % 14-8 1-2 % 12-8 1-2 % 12-8 1-2 % 12-8 1-3 % 13-8 1-3 % 13-8	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX		50wn H 50wn H 50wn H 50wn H 50wn U 10Tim 1758	HANGES HAY	Н Н Н Н Н Н Н Н Н Н Н Н Н Н Н Н Н Н Н	-9.06 Own -9.06 Own -9.06 Own -9.8 Own -7.53 Wis	17409 17409	0.41B 1.41BV 1.41BV 1.41BV W.841A W.841A	8391 5012 578 578	88077 C 88077 C 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8		2222	9x3x4 9x3x4 7xx3x4 7xx3x4 10xx3x4 10xx3x4 10xx3x4 10xx3x4	#H-00000
Marmon-MH440-4 Herr. MH555-4 (C) CMM6-4				4847 4847	0.00/20D 0.00/20D 0.00/20D 0.50/20D 0.50/20D	0.00/20 1.00/20 50/20	Her WXLC3 Her RXC Ford Ford	THE	23966 23966 23966	293 390 176 176	2888	7-2%x8 7-3x9x 3-2%x4 3-2%x4	N Ford	620	Tim		****	672	r F2090W F3100W n M5 n M5	W A A E	584 3022 3022 3032	887 039 c 563 s 563 s	লিলিলিল	27.038 44	94 x3x 4 10 4 x3x 4 7x2 4 x 5 7x2 4 x 5	
W-307 W-700 W-703 W-906					10.00/20 11.00/20 12.00/20	11.00/20 12.00/208 12.00/208 14.00/208	Her WXLC3 Her RXCO Her RXLD Cum HB600	7777 7777 7777 7777 7777 7777 7777 7777 7777	404 55295 672 672 17	3310 4405 500 500 500 500	118-25007 128-22007 141-22007 150-18007	7-2%x13% 7-3x12% 7-3%x13% 7-4%x16	Y Fu 5A Y Fu 5A Y Fu 4A	5A43 5A620 5A620 4A86	5 Tim 58300 5 Own W700 5 Own W700 4 Own W906	E444 4	#### #	-7.8 Own -6.6 Own -6.2 Own -6.42 Tim	W307 W700 W906 W906	LAIII LAIIH LAIIH LTAIWB W841A	560 630 645 645 800	975 G 975 G 975 G 975 G	KKKK E	805555	8 14 x 3 x 3 x 3 x 10 3 x x 3 x 3 x 3 x 3 x 3 x 3 x 3 x 3 x	
Walter (e.f.) FZM (e.f.) FZM (e.f.) FZM (e.f.) FCM (e.f.) FCK (e.f.) FCK (e.f.) FCK (e.f.) FCB (e.f.) FGB (e.f.) FGB		200000000000000000000000000000000000000	150 2000 150 24000 152 24000 153 25000 162 42000 162 32000 162 42000		2000000 2000000 2000000000000000000000	10.00/208 112.00/208 112.00/248 112.00/24 112.00/24 112.00/24 12.00/24		44444400	404 404 717 717 717 817	74555550 25865550 745555550 7455555555	100-25007 125-22007 125-22007 125-22007 125-22007 175-20007 175-20007	44444444	Y OWN Y OWN Y OWN Y OWN Y OWN Y OWN Y	AAGGGGAA		***************************************	4444000	00-88-0 00-88-	DEFINE PECK	0041A 0041A 0041A 0041A 0041A	44400000000000000000000000000000000000	670 670 670 670 670 670 670 670 670 670		2222222	7x2%xy 12x3%xy 13x3%xy 14x3%xy 14x3%xy 14x3%xy 14x3%xy 14x3%xy	
Uav. Jp CJ-2A	•1090	08	80 2937	37 +1646	86.00/16	7.00/15	Own CJ-2A	1-3 1/24 M	1346.	4 105	60-40003	3-2.33x5.48	NWG	T90A	38pl 41-2	Hy	=======================================	-5.38 Spi	25	В4Н	118	520a	Eq.	80	4x1%1x4	Д
Six-Wheelers Wheels Drives Corbitt 35RG 40RG 40RG 508D6		2222	Opt 35000 Opt 40000 Opt 50000	8888	10.00/20 10.00/22 10.00/22 10.00/22	10.00/22 10.00/22 10.00/22 11.00/22	Con B6427 Con R6602 Con R6513 Her HXD	44-0 44-0 47272 44472 7272	427 6026 55135	13321 04601 94001 6452	127-26007 185-26007 165-26007 203-21007	7-2% x 14 x 14 x 17-3% x 14 x 1	AAA AAA	5A43 5A65 4A66	5T SED1500PA 5T SED1500PA 10T SFD154W 8T SD353W	PP A A A A A A A A A A A A A A A A A A	HHHH ****	-6.44 Tim -6.84 Tim -8.43 Tim -7.33 Tim	m 35000TW m 35100TW m F2090W m F3100W	Ws6IA Ws6IA Ws6IA Ws6IA		1094 a 1567 a 1302 a 1626 a	X 222	0000	00% # 33 # % 00% # 33 # % 00% # 33 # %	4444
Diamond T 900SD3010PA (D)910SW3012PA (D)910SD462W		200	204 206 40000 206 50000	00 13750 000 15100 000 16300	0 10.00/22D 0 10.00/22D 0 11.00/22D	10.00/22	Her RXLC Cum HB-600 Cum HB600	6-4% 6-4% 6-4% 6-4% 6-4%	529 672 672	5.43651 17.5001 17.5001	132-2100 150-1800 150-1800	7-3 %x13 % 7-4 %x16 % 7-4 %x16 %	X Spi	6241, 703 7851, 703 7851, 703	12 T SD3010P 15 T SW3012P 15 T SD462W	A 225 25 25 25 25 25 25 25 25 25 25 25 25	EXE	-7.50 -6.07 T	m 36021 TW m 36021 TW m 36021 TW	WeelA WeelA WeelA	1082	444	555	134	0 %x3 x3	444





LO-EX* PISTONS by OHIO

Yes, sir! You're doing an engine a real favor when you employ LO-EX PISTONS by OHIO for that replacement job. Added pep and power—New economy of fuel and oil—Longer engine life.

LO-EX PISTONS are standard equipment in many passenger car, bus and truck engines, put there by manufacturers who recognize their greater value. You profit by years of satisfactory experience when you use these power-packing pistons for your replacement work.

Specify "LO-EX PISTONS, machined and sold by OHIO", and be assured of the finest pistons money can buy.

*LO-EX and Lynite are registered trademarks of Aluminum Company of America, makers of castings for genuine Lynite Pistons.

THE OHIO PISTON CO.

CLEVELAND, OHIO, U. S. A.

(Continued from Page 100)

BRAKES	1	
100	-	Tabe
Area Drum Material Hand Location	Lining Area Drum Area Material Material Material	
Area Location Material Material Material Type Type	Area Drum Area Drum Material Hand Locari	1680a T6
2010.17 000 000 000 000 000 000 000 000 000 0	Area Market Mark	1080 1680 a 1080 1680 a 1080 1680 a 507 848 c 705 944 c G
Make and Make and Make and Make and Model Model Model Model Make and Make a	Make and Model Mod	F409 F409 F760 F760 F760 F760 F760 F760 F760 F760
Obsaff asso. Agilt at search Agilt at	Coer Resignment (1982)	6.16-6 660 WB 6.06-7 160 WB 6.
Coest Readon Coe	Three & Toring Marketing William Burnes in 10 to	HE HE SECTION AND A SECTION AN
Porward Sp'ds Wessend Wessen	### ### ### ### ### ### ### ### #### ####	8 Wis SD462 8 Wis SD462 6 Own RF1650 5 Own RF1650 4 TI SW3012P A 6 TI SW3012P A 6 TI SW3012P A 7 TI SW3012P A 7 TI SW3012P A 6 TI SW3012P A 7 TI SW3012P A
Make and	N KKKKKK KKZ KK COVETROF St	Z KKKKKK KKZ KK
150-1-20 Mar. Brake. Bamber.	Number, Number	07-3% #16% 07-3% #16% 07-3% #100# 07-3% #100# 07-3% #100#
Torque ib. ft. Mar. Brake H.P. at R.P.M. Given	Mar. Brake	
	-	Bore and Stroke Displaceme Comp. Rat
	_	No. of Cylinders, Hore and
	1	Make and
	D-dual rear S-single rear	Maximum Muthorized Authorized Tire Size (Dusis un-
	(mc	(See definition Standard Front and Rear
le)	this court	Gross Vehici for Mormal a
BASE		Minimum Standard Maximum Standard
•	Pric	Chassis List
		MAKE
		Line Numbe

ODT TO CERTIFY DEFERMENTS

OF TRANSPORT WORKERS

Administration.

boards under the Selective Service Act was delegated recently to the Office of Defense Transportation by the Civilian Production Authority to certify a limited number of workers in the transportation industry for consideration for deferment by local

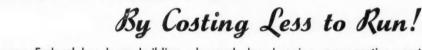
tive Service Headquarters will indicate that certification is being made by ODT as Certifications by ODT to National Selecagent of CPA. Certifications will be limited and will be made in accordance with the standards set forth in amended memorandum No. 115, Selective Service Local Board. transportation and the experience of ODT in handling deferment matters for workers in the transportation industry. The delegation of authority from CPA to ODT was made at the request of the Office of War Mobilization and Reconversion in view of the special problems in

NO AUTO SPARE TIRES YET

The restriction against a fifth new tire on new automobiles will be continued at least until October 1, W. James Sears, director of the Civilian Production Administration Rubber Division, has announced. The restriction is contained in CPA's Rubber Order, R-1.



FEDERALS HAVE WON .





transportation industry.

the

i.

to the Office of Defense the Civilian Production

delegated recently Transportation by

IRNAL

Federal was cited four times for its excellence in war production—building trucks of all types for the Armed Services.

For 36 years Federal has been building learned by keeping comparative cost trucks that have enjoyed an outstanding reputation for ruggedness, dependability, low upkeep cost, long life and bed-rock operating economy.

Men in a position to judge—fleet owners, maintenance superintendents, service mechanics, dispatchers and drivers—have

FEDERAL MOTOR TRUCK CO.

records, checking lay-up time, servicing and running costs that Federal Trucks have those qualities of endurance, economy and rugged all-truck performance that insure owner satisfaction.

That's why so many truck users now say: "Toss the Tough Jobs to Federal."

DETROIT 9, MICHIGAN





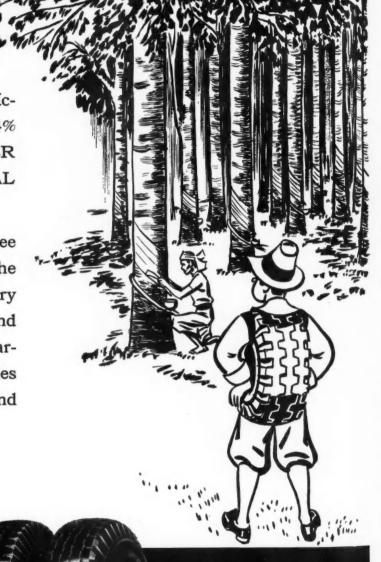


MORE NATURAL RUBBER in MCCREARY TRUCK TIRES

IT'S TRUE! All large size Mc-Creary Truck Tires are 94% NATURAL CRUDE RUBBER ... smaller sizes 67% NATURAL CRUDE RUBBER.

This means more trouble-free miles from your tires—at the lowest cost per mile. In McCreary Tires More Natural Rubber—and the precision-built McCreary carcass—mean more original miles ... more recaps per casing... and more miles on every recap!

Get McCreary's-get the best!





HERE'S WHERE YOU WILL FIND McCREARY DEALERS



MCCREARY
"Built for Longer Service"
I TIRES

MANUFACTURERS OF QUALITY TIRES FOR OVER 30 YEARS

MCCREARY TIRE AND RUBBER CO. . INDIANA, PA.

Federal Offers Four New Models in 30,000 to 55,000 Lb. Range

FEDERAL Truck is making plans for the addition of four new heavy-duty models to augment its present line.

These units will include the new 65MA of 30,000 lb. g.v.w. with a double reduction drive axle and an auxiliary transmission, as well as three tandem axle six-wheelers having gross vehicle weights of 40,000 to 55,000 lb. All four of these units will be powered with a Continental R-6602 valve-in-head gasoline engine of 602-cu. in. displacement, developing 200 hp. at 2600 r.p.m. and a torque of 464 ft. lb. at 1250 r.p.m.



Front end view of one model of the new Federal Motor trucks which will soon be available

The 65MA will be similar to Federal's recently announced Model 65M2 now coming off production lines. Important difference between the two is that the new model will be equipped with a double reduction axle and auxiliary transmission, instead of a two-speed rear axle.

Especially designed for heavy-duty highway hauling, Federal is introducing the new Model 663MA six-wheeler of 40,000 lb. g.v.w. which has been engineered to meet the demands of operators who require maximum speed and encounter some of the toughest highway transport assignments. This unit will have a Timken SW-3012 tandem worm drive axle and is particularly suited for long hard pulls on mountain grades. Many new improvements for high torque operation have been incorporated in the design of this axle such as increased worm centers, lower unit area tooth pressures, larger differential, controlled lubrication and increased capacity bearings.

Another Federal six-wheeler, the Model 664MA of 55,000 lb. g.v.w. has been developed for heavy duty off-the-road operations where long, hard, steady pulling power is required. It will be equipped with a Timken SD-462 tandem double reduction axle unit. Federal engineers feel this unit will find favor in oil field and construction work, as well as in logging and open pit mining operations.

Federal will also manufacture a third six-wheeler, the Model 664MAB, of 55,000 lb. g.v.w., for heavy duty on and off the highway work where top performance and traction is of prime requisite. This vehicle

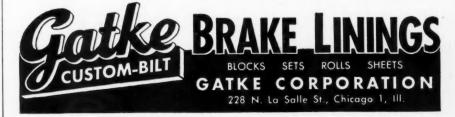
will have a Timken SW-456 tandem worm drive unit.

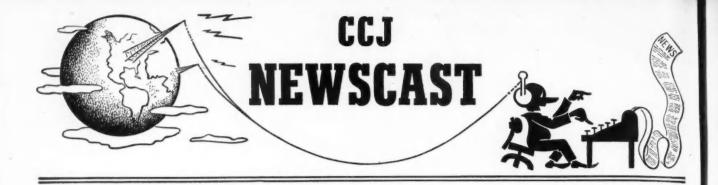
The rear axle construction of all of these six-wheelers is so designed that correct alignment and weight distribution is maintained at all times. Torque rods arranged in parallelogram, transmit all driving and braking forces from axles to chassis, keeping axles correctly aligned under every operating condition and preventing any possi-

bility of weight being transferred from either axle to the other. These heavy-duty Federal units will be air-brake equipped with maximum size brake shoes, front and rear, to assure greatest safety of operation.

Production of some of the new units is expected to get under way within the next few weeks, with others scheduled for assembly lines later this year. The four new units just announced bring to 17 the number of models planned for production or being manufactured by Federal for commercial use. These units have nominal ratings ranging from the new Model 16M—1½-ton truck of 13,500 lb. g.v.w. to the giant 55,000 lb. g.v.w. units just announced.







TRAILER OUTPUT TOPS RECORD

The truck-trailer manufacturing industry this year will exceed an unofficial goal of 60,000 vehicles, thereby setting a peacetime production record for any year in the history of the industry.

Authority for that statement is Julius L. Glick, president of the Truck-Trailer Mfrs.

Assn.

Mr. Glick pointed out that in the first six months of this year, trailer plants produced 32,974 units—almost equal to the 32,987 civilian trailers built in all of 1945. The six-month production, he noted, witnessed an all-time monthly peak of 6691 units for commercial use in April, followed by a near-record of 6617 units in May.

Mr. Glick said, "A full-year production of 60,000 units or better is well within reach. Such a production would compare with a record of 41,869 civilian-type units established in 1941. Potential productive power is indicated by the fact that an all-time record for all types was set in 1944 when 209,441 trailers were manufactured, including 185,349 military vehicles."

NEW DU PONT CHEMICAL PLANT

A plant to cost approximately a million dollars for the manufacture of Du Pont chemical specialties, including such automotive maintenance products as polishes, waxes, cooling system cleaner, sealer and rust inhibitor, will be built at West Toledo, Ohio.

CORRECTED TIRE & RIM DATA

A typographical error has been discovered in the table comparing various truck and bus tire and rim combinations appearing on page 38 of the August issue. The first line of the second column should read 3.75P, not 5.75P.

Meanwhile the Federal Motor Truck Co. has furnished corrected tire and rim combination data as an amendment to the table appearing on page 40 of the same issue. Herewith the revised specifications for current Federal models:

DODGE RATING CHANGES

Since publication of the announcement of the Dodge line of 2½-ton and 3-ton trucks, several changes have been made in the rating of the models. The rating of the 3-ton WK models is 21,000 g.v.w., on the 2½-ton WJ models—18,500 g.v.w. Gross train weight is 34,000 lb. for the WJ Series, 40,000 for the 3-ton heavy WR Series.

The service brake area for the WJ Series is 396.3 sq. in. On the steering gear, the variable ratio for the cam and twin lever gear on WK and WR series is as follows: 23.4 to 1 at each end and 19.5 to 1 at the center.

DATES AND DOINGS

OCT. 23-24—Convention & Exhibit, American Society of Body Engineers Inc., Rackham Memorial Bldg, Detroit.

DEC. 4-7—Annual Meeting, National Wheel & Rim Association, Edgewater Beach Hotel, Chicago.

DEC. 9-14—Automotive Service Industries Show, Convention Hall, Atlantic City, N. J.

JAN. 6-10 — Annual Meeting & Exhibit, Society of Automotive Engineers, Book-Cadillac Hotel, Detroit.

D. H. COLLINS JOINS HASTINGS

Don H. Collins, Indianapolis, has been appointed advertising director for the Hastings Mfg. Co., of Hastings, Mich.,

and its associate company, The Casite Corp. Mr. Collins has been prominent in advertising circles for many years, his career having been entirely in the agency business. He was one of the founders of Keeling & Co.,



Inc., where he was executive vice-president.

CEILING OFF 10-TON TRUCKS

The OPA has suspended from price control trucks of 30,000 gross vehicle weight and over, which includes 10-ton trucks. Previously, trucks of over 40,000 lb. g.v.w. had been suspended and the current order extends the suspension to include additional heavy trucks. OPA pointed out that these trucks are bought generally by industrial users and make up only a small part of their business costs.

ATA LAW BOOK READY

A revised edition of the Motor Carrier Act, amended to July 15, 1946, has been published by the American Trucking Associations in a compact volume containing the law's legislative history and related statutes.

The edition, priced at \$2, includes a topical index for locating statutory provisions covering questions that may arise under the Act. Related statutes in the volume include the Compulsory Testimony Act, Immunity of Witnesses Act, Bills of Lading Act, Transportation of Explosives, Agricultural Marketing Act, Transportation Act of 1940, including the "Boren" land grant amendment, Civil Aeronautics Act of 1938, and the Elkins Act.

The volume also includes a new format, with paragraph numbers in bold-face type at the bottom of each page to facilitate reference work.

SURPLUS TRUCKS SCARCE

Demand for certain surplus property items set aside for veterans so far exceeda supply that certification for their purchase has been discontinued, War Assets Administration has announced.

Besides the jeep, the type of trucks for which no more certifications will be issued include the one-half ton 4 x 2 canopy express and panel delivery and the 4 x 4 carryall; the three-quarter-ton 4 x 2 panel delivery and pickup; the one-ton 4 x 2 canopy express and pickup; the one and one-half-ton 4 x 2 combination stake and platform, cargo, canopy express, dump, panel delivery and pickup; the one and one-half-ton 4 x 4 combination stake and platforms and panel delivery; the two and one-half-ton 4 x 2 cargo and combination stake and platform and dump, and the one and one-half and two and one-half 4 x 2 and 4 x 4 tractors.

(TURN TO PAGE 108, PLEASE)

TRUCK MAKE	STANE			MAXIMUM
(Current Production)	Tire Size	Rim Size	Tire	Size Rim Size
16M	7.50 x 20	5.50		x 20 5.50
18M, 18M2 29M, 29M2	8.25 × 20 9.00 × 20	5.50 6.50		x 20 5.50 x 20 6.50
29MA	9.00 x 20	6.50	. 10.00	x 20 7.33
45M	10.00 x 20	7.33	10.00	
45 M2 85 M. 55 M A. 60 M A. 60 M 2	10.00 x 22 11.00 x 22	7.33 8.00	10.00 11.00	
65M2, 65MA	11.00 x 22	8.00	11.00	

HOW DIAMONDS RUN COOLER, LONGER EVEN AT HIGH SPEED



An outstanding achievement in Truck Tire performance made possible through the science of

ELECTRONICS

You know how superior rayon is to cotton when used in truck tire cords. It makes a stronger carcass, holds heat down, puts up greater resistance to punishment.

In today's Diamond truck tires you not only get all these advantages of rayon cord, but also the *additional* mileage-stretching qualities of a WEFTLESS TYPE CON-STRUCTION.

To give you this extra value, Diamond uses ELEC-TRONIC processing methods. Only by ELECTRONICS can rayon's natural kink and curl be removed—permitting the cord to be laid parallel and flat. Criss-cross cords that saw against each other, building up dangerous heat, are eliminated. You get a tire that runs cooler, farther, even on fast, tough hauls.



TIRES FOR PASSENGER CARS AND TRUCKS . AKRON, OHIO, AND LOS ANGELES, CALIF.

CCI NEWSCAST

(CONTINUED FROM PAGE 106)

These goods will remain on the so-called "Set-Aside List," however, and only veterans may buy any which are or may become surplus.

All items set aside are in short supply. and veterans' purchases of some of them have been so heavy in recent months that the chance of a new applicant getting one of certain offerings is only one in 10, 20, or 30, or even less, depending on the type of model.

FORD HAS NEW CENTRAL REGION

Creation of a new Ford Motor Co. sales region, with headquarters in Dearborn, and appointment of Alan B. Pease as manager of the new region, has been announced.

The new region will be known as the Central region, and will be the sixth in the United States. The other five regions are Southeastern, with headquarters at Chester, Pa.; Northeastern, with headquarters at Edgewater, N. J.; Midwestern, with headquarters at Chicago; Western, with headquarters at Richmond, Cal.; and Southwestern, with headquarters at Kansas City, Mo.

District offices which will be under Mr.

Pease's supervision are Dearborn, Cleve. land, O., Cincinnati, O., Louisville, Ky., and Indianapolis, Ind.

Dearborn formerly operated as an independent district, Cincinnati and Louisville were in the Southeastern region, Cleveland was in the Northeastern region, and Indianapolis was in the Midwestern region.

Mr. Pease has been in charge of the light car division which was discontinued in August.

CHEVROLET-TARRYTOWN PLANT PRODUCING CARS AND TRUCKS

After more than four and one-half years, most of it devoted to war work, the Chevrolet-Tarrytown division of General Motors is once more producing passenger cars and

On the truck assembly line, work is progressing at a slightly higher rate than on the passenger car line, but plant officials state that in a reasonably short time, conditions remaining as they are, it is anticipated that passenger car production will catch up with, then overtake the production of trucks.

FWD ANNOUNCES NEW M10 SNOW REMOVER

Manufacture of the FWD Model M10, which was virtually out of production during the war, is being resumed, according to officials of The Four Wheel Drive Auto Co. The 12-ton model will meet the need of highway departments in the snowbelt for a truck with the "drift-busting" qualities of the prewar M10 snow removal truck.

Among the improvements in design on the M10 are the FWD Universal cab, which features a number of comfort and safety advantages, a sturdy streamline radiator grill and improved heavy-duty axles. Engines with higher horsepower rating will be installed in the M10. The standard engine is a gasoline 186 hp. engine with a customer's option on the installation of a 200 hp. Diesel engine. The rated gross vehicle weight of the Model M10 is 44,000 lb.

While the FWD Model M10 has been placed in snow removal service by most highway departments, the new Model M10 will be marketed as a year 'round performer in all types of highway construction and maintenance.

No

Ge

hea

tha

por

lon

De

(TURN TO PAGE 112, PLEASE)



New FWD Model M10, twelve-ton truck. The truck will be offered with optional gasoline or diesel engines of 186 and 200 bhp. respectively. Gross vehicle weight of this largest in The Four Wheel Drive Auto Co.'s line of four-wheel-drive trucks is given at 44,000 lb.



ments and Special Tools. They speed up overhauling jobs, stop parts damage, conserve energy, avoid skinned knuckles, shorten "down time" on trucks.

Approved by all Leading Bearing Manufacturers.

OTC No. PE-12 SET handles the widest possible range of work on trucks, busses and tractors-with minimum number of OTC TOOLS.

ASK YOUR JOBBER or write for OTC Catalog. It's a helpful manual on pulling operations.

OWATONNA TOOL CO. 335 CEDAR STREET, OWATONNA, MINN.





INDEPENDENT OF ENGINE

No more valuable man-hours lost because the weather's too cold—not if your trucks are equipped with the new South Wind Deluxe Truck Heater that creates its own heat.

No need to keep engines running to keep warm, either. Get quick starts in cold weather, and prevent oil dilution, by heating the engine with this heater that's plenty hot in less than a minute.

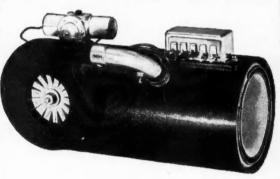
It's not pretty, but this South Wind is all heater, tough, powerful, built for heavy duty. And placed out-of-the-way, unseen, its welded stainless steel construction will serve you long and well.

Why not talk over your truck heating problems with our engineer? No obligation. South Wind Division, Stewart-Warner Corporation, Dept. 950, Indianapolis 7, Indiana.





DELUXE TRUCK HEATER



A Few Quick Facts:

- MORE HEAT...up to 20,000 BTU's per hour...even when engine is cold.
- ALWAYS READY . . . maximum output within one minute after heater is turned on . . . not dependent on engine operation.
- COMPLETELY AUTOMATIC . . . set it and forget it . . . keeps temperature in cab or cargo space constant without attention from driver.
- FRESH AIR VENTILATION . . . warms and distributes more than 100 cubic feet of fresh air per minute . . . keeps driver alert, and windows clear of fog and frost.

nal 200

JAL

Amazing

ONLY 1/3 AS OFTEN

The Answer to
The Answer to
One Major Cause of
Battery Failure

GREATER ECONOMY Less Maintenance

印心几乎

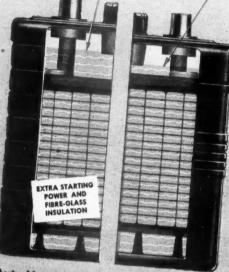
OCTO



Unique new design and construction gives Auto-Lite "Sta-ful" more than 3 times the liquid reserve of ordinary batteries.

Both Batteries Filled

Liquid Level After Equal Evaporation



Auto-Lite "Sta-ful"

Ordinary Type

PLATES COVERED AND ACTIVE

ATES EXPOSED AND INACTIVE

Illustrations above show the result of equal evaporation in the Auto-Lite "Sta-ful" Battery and other batteries.

As shown by illustration on the far right, plates of ordinary batteries are exposed sooner by water loss and then become inactive faster.

Auto-Lite "Sta-ful" Bat-tery plates are kept sub-merged to help deliver full life and power long after the plates in ordi-nary batteries are ex-posed and inactive.



Parched and Dry

National surveys among fleet operators show that dry plates comprise one major cause of battery failure. See your Auto-Lite "Sta-ful" Battery Supplier today.



TOLEDO 1

AUTO-LITE BATTERY CORPORATION

ufacturing Plants at: Niagara Falls • Indianapolis • Atlanta • Oakland • Oklahoma City • Toronto TUNE IN THE AUTO-LITE RADIO SHOW STARRING DICK HAYMES, THURSDAYS, 9:00 P. M.—E. T. ON CBS

ORIGINAL EQUIPMENT



URNAL

CCJ NEWSCAST

(CONTINUED FROM PAGE 108)

ATA PLANS TRUCK ADS FOR CHECK BOOKS

Check books containing industry-wide advertising on the face of each check would be put into use by motor carriers throughout the country under a plan disclosed by the American Trucking Assns. The new advertising plan is based on statistics showing an average of 16 persons handle every check that is drawn.

The association has developed a standard format the basic design of which can be adapted for use by any carrier, regardless of the checking arrangements now in use. Each check would carry the individual carrier's firm name, along with any slogans or emblems he might wish to add.

Engraved panels on the check would carry advertising messages applicable to the entire trucking industry. One reads: "Everything Americans eat, use, wear, comes all or part way by truck," and another: "America's cities, great and small, depend on motor trucks for food." An emblem in one corner states: "This is motor truck money," while another shows employes at a pay window above which is lettered, "Trucking employs more than 3½ million people."

The checks are self-canceling if altered. Use of ink eradicator causes the word "Void" to appear on the face of the check, while use of a knife or rubber eraser turns the altered surface white. To eliminate counterfeiting, the special paper is guarded as carefully as that used for Government currency and cannot be obtained in blank,

KRIEGER CORRECTION

The statement published in the August issue of this publication with respect to the leasing of certain properties from Krieger Steel Sections, Inc., by Davisbilt Products Co. of Cincinnati, Ohio, was erroneous, and there was no leasing agreement made between the two companies.

Only the entire tank and trailerized tank division manufacturing facilities of Krieger Steel Sections, Inc., have been contracted for by the Davisbilt Products Co. This was done to facilitate delivery of tank orders held by them and to help meet the accelerated demand against anticipated volume. Krieger Steel Sections, Inc., tank division, has been geared to a productive basis of approximately 150 tanks per month and Davisbilt engineers and inspectors will supervise the design of such tanks. All other divisions of Krieger Steel Sections. Inc., will continue, as heretofore, in the manufacture and direct sale to the trade of automotive and other mobile equipment.

STEEL COMPANY CONSOLIDATES SALES, SERVICE DIVISIONS

Consolidation of sales development and engineering service divisions of Allegheny Ludlum Steel Corp. under the managership of W. B. Pierce has been announced.

Functions of the new department will be to coordinate and extend the company's cooperation with users and fabricators of stainless steel on their problems of applications and uses. Special attention will be given to the development of new markets for the introduction of new alloys.

PANTASOTE MERGER

The Pantasote Co. of Passaic, N. J., and the Textileather Corp. of Toledo, Ohio, have merged, forming a new corporation— Pantasote Plastics, Inc.

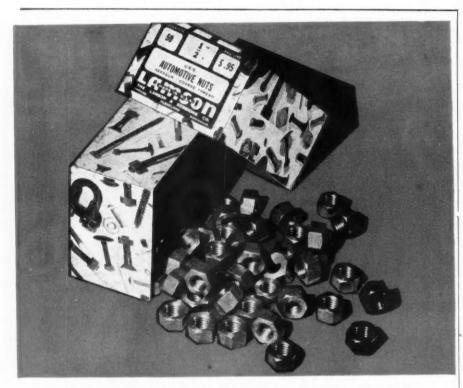
(TURN TO PAGE 114, PLEASE)

tare

Gre



Back-breaking labor is out for drivers of trucks equipped with an elevating endgate. Old-fashioned manual lifting is replaced by smooth hydraulic power which lifts or lowers loads up to a ton in 10 sec. The unit is available through Fruehauf Trailer Co. branches for installation on any make of truck or trailer



cost you no more to use

Automotive engineers' steady trend toward making the modern motor car lighter in weight, more compact in construction, yet with increased passenger space is emphasized by the Lamson USS Automotive Nut—an American Standard Light (SAE) Nut in outside dimensions, but tapped with National Coarse (USS) threads. The same wrench sizes are used for both Fine Thread Nuts and Lamson USS Automotive Nuts—but weight savings by the latter nut are considerable, used generously as they are on the modern motor car. They are priced the same as the American Standard Light (SAE) Semi-Finished Hexagon Nuts. Stocks of Lamson USS Automotive Nuts are ample.

THE LAMSON & SESSIONS COMPANY, 1971 West 85th Street, Cleveland 2, 0hio
Plants at Cleveland and Kent, Ohio; Chicago and Birmingham

CAP AND SET SCREWS . SEMI-FINISHED NUTS . COTTERS . LOCK NUTS . STUDS . CLIP BOLTS

LAMSON & SESSIONS

Ask your Jobber for the Lamson Line

SPRING CENTER BOLTS . BATTERY BOLTS . LICENSE BOLTS . WASHERS . TRACTOR BOLTS . HI-NUTS



CASITE

GIVES QUICK STARTING EVEN IN COLDEST WINTER WEATHER



0,

nd-

10 ue

ion

NAL

Get your motors ready for the cold weather ahead. Knock that "Winter starting problem" for a row of ten pins—with Casite. Even at sub-zero, Casite re-

tards congealing of oil—lets engines spin over rapidly—and start. Greatly reduces start-up wear.

Casite also protects new motors during the critical break-in period gives old motors better and smoother performance.

Put Casite in all your motors now, and every 1000 miles—for quick, sure starting all winter long.

WHAT CASITE DOES

- · Speeds up lubrication on cold starts.
- Retards congealing of oil.
- Gives Quick Starting Even Below Zero.
- Carries oil to the tight spots.
- Reduces formation of sludge.
- Protects New Motors During Break-In Period.
- Greatly reduces start-up wear.
- Frees sticking valves and rings.
- Gives Better and Smoother Performance, All-Year-Round.

TUNE IN

"RIGHT DOWN YOUR ALLEY"

Coast-to-Coast Network, American Broadcasting Company

EVERY SUNDAY AFTERNOON

4:30 Eastern Standard Time 3:30 Central Standard Time

2:30 Mountain Standard Time

1:30 Pacific Standard Time

CLEANS MOTORS KEEPS MOTORS CLEAN



CCJ NEWSCAST

(CONTINUED FROM PAGE 112)

Management of Pantasote Plastics, the top company, will include officials of the constituent companies, as follows: Hans Wyman, president; J. D. Lippman and Henry W. Wyman, vice-presidents; Rudolf Koppl, treasurer, and Henry Cape, Jr., secretary. The board of directors will include all officers (excepting Mr. Cape) and L. H. Green, of Detroit, Mich., Textileather's board chairman, and H. E. Collin, of Toledo, director of Textileather and chairman of its executive committee.

ELECTRIC AUTO-LITE AND TRAILMOBILE AWARD WINNERS

For the third consecutive year, Robert I. Gayley, director of Safety for the Supplee-Wills-Jones Milk Co., has been named winner in the unlimited mileage class for local motor truck operations in the Electric Auto-Lite Co.'s annual contest for safety directors of motor carriers throughout the

At the same time, American Trucking Associations announced that the Trailmobile trophy, awarded annually by the Trailmobile Co., had been won by Silver Fleet Motor Express, Inc., of Louisville, Ky., for the second consecutive year. Basis for the Trailmobile award is the highway safety and courtesy program of the competing motor fleets.

Both contests were conducted simultaneously with the Twelfth National Truck Safety Contest of the American Trucking Associations.

The Auto-Lite awards were made to officials who were directly responsible for outstanding fleet safety records. The awards include portable radios and electric clocks.

In the local operation division, the winner for companies operating from 100,000 to 500,000 miles was R. A. Warmath, director of safety for the Clover Farm Dairy Co., Memphis, Tenn.

In the long distance division, the winners

Class 2, 500,000 to one million miles of operation—James A. Pipkin, manager, Barton-Robison Convoy Co., Inc., Oklahoma City; honorable mention, A. B. Snaveley, chief engineer, Hershey Chocolate Corp., Hershey, Pa.

Class 3, one to two million miles—Fred R. Suddarth, president, Kaw Transport Co., Sugar Creek, Mo.; honorable mention, C. W. Kelley, owner, C. W. Kelley Transport, Hutchinson, Ky.

Class 4, two to three million miles—M. E. Bealey, vice president, Silver Eagle Co., Portland, Ore.; honorable mention, M. J. Hrebec, superintendent of truck operation, Missouri Pacific Freight Transport Co., Houston, Tex. In the combined local and long distance divisions, the winners were:

Class 2, 100,000 to 500,000 miles—Griswold B. Holman, president, G. B. Holman & Co., Inc., Rutherford, N. J.; honorable mention, Bishop R. Wilcox, Maffet Transfer Line, Elisa-bethtown, Ky.

Light

again

These

prove

wear.

the fo

for He

When

the ch

We ho

vears

as re-r there is

Your ris Our

garage

equipu

of doin

tainly much 1

RIGH

Class 3, 500,000 to one million miles—Paul R. Newsom, partner, Newsom Trucking Co., Columbus, Ohio; honorable mention, Chester C. Loving, truck supervisor, Actna Oil Co., C. Loving, tru Louisville, Ky.

Class 4, one to two million miles—Carl Bellisle, dispatcher, Pacific Transport, Inc., Bellovue, Wash.; honorable mention, John D. Watsker, driver foreman, Alton Box Board Co., Alton, Ill.

Class 5, two to three million miles—Kenneth R. Field, operations manager, Coast Line Truck Service, Inc., Watsonville, Calif.

Class 6, three to five million miles—Harold B. Dudley, safety director, Best Motor Lines, Dallas, Tex.; honorable mention, Arthur M. Korn, director of safety and personnel, Cushman Motor Delivery Co., Chicago.

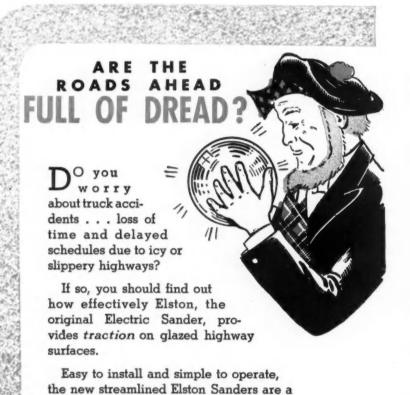
Class 7, more than five million miles—Jack Biery, director of safety and personnel, Huber & Huber Motor Express, Inc., Louisville, Ky.; honorable mention, E. J. Alger, director of safety and personnel, Geo. F. Alger Co., Detroit.

Judges in the contest were Norman Damon, vice-president of the Automotive Safety Foundation; George R. Wellington, Chief of the Section of Safety, Bureau of Motor Carriers, Interstate Commerce Commission, and Alvin B. Barber, chief of the Transportation Division, United States Chamber of Commerce.

(TURN TO PAGE 116, PLEASE)



These two 20-ft. Highway "Clipper" Trailers, equipped with converter dolly for train operation, are the first of four Highways recently delivered to Mike Shaheen, owner of a large Pepsi-Cola distributorship in Flint, Mich.



safe, sure way of providing grip for drive

This safety control equipment operates from

simple pilot light switch on dashboard. Control of

traction is always at the driver's finger tip! A flip

when needed!

wheels that slip.

HIGHWAY SAFETY APPLIANCES, INC.

Mfrs. of ELSTON the original ELECTRIC SANDER 1381 Marshall Avenue . St. Paul 4, Minnesota

of the switch and presto! . . .

a sand-sprayed road is his

Inquire today for informa-

tion on Elston Electric Sanders as applied to your trucks!

Write for free folder!

Soft pressure does it!

Light inner ring . . . soft pressure . . . steel against cast iron, well lubricated.

These are highlights of Steel-Vent's proven ability to control oil with minimum wear. In this combination of features lies the foundation of today's strong demand for Hastings piston rings.

Soft Pressure Does It-In Rebores, Too

When the going is extra tough, you'll find the choice is Steel-Vent.

"We have used your Steel-Vent ring for the past seven years with very satisfactory results in rebore as well as re-ring jobs and to our knowledge we can say that there is nothing that gives us the results we get with your ring.

Our jobs are perhaps different than the average repair garage as 90% of our work is on road construction equipment. We feel that if Hastings rings are capable of doing a satisfactory job in such motors they will certainly do a job in the average truck working under much less severe conditions."

Listen to
"RIGHT DOWN YOUR ALLEY":
American Broadcasting Company

EVERY SUNDAY AFTERNOON

4:30 Eastern Standard Time 3:30 Central Standard Time 2:30 Mountain Standard Time 1:30 Pacific Standard Time

HASTINGS MANUFACTURING COMPANY • HASTINGS, MICHIGAN
Hastings Ltd., Toronto

HASTINGS STEEL-VENT
PISTON RINGS
0.5. PAT. 2,148,997

TOUGH ON OIL-PUMPING GENTLE ON CYLINDER WALLS

CCJ NEWSCAST

(CONTINUED FROM PAGE 114)

ATA ANNOUNCES TRUCK SAFETY AWARD WINNERS

Winners in the Twelfth National Truck Safety Contest has been announced by the American Trucking Associations, with Huber & Huber Motor Express, Inc., Louisville, Ky., topping all competing truck lines in the combined local and long distance division for carriers operating more than 5,000,000 miles during the year. Basis for the awards was the accidentfrequency record of each carrier, plus the over-all safety program carried out.

The North Carolina Motor Carriers Association was declared the winner in the motor truck association division of the safety contest. Awards of honor went to the Indiana Motor Truck Association, the Tennessee Motor Transport Association and the Texas Motor Transportation Association. Receiving awards of merit were the Kentucky Motor Transport Association, Louisiana Motor Transport Association, Oregon Motor Transport Association, Wisconsin Motor Carriers Association and the Wyoming Trucking Association.

Repeating its performance in 1944 and

1945, the George F. Alger Co., Detroit, won an award of honor in the division won by Huber & Huber. Awards of merit in the same division, Class C-7, were won by the Silver Fleet Motor Express, Inc., Louis. ville, Ky.; All States Freight, Inc., Akron, Ohio, and Garrett Freightlines, Inc., Pocatello, Idaho.

Winners in the local division were Consolidated Dairy Products Co., Inc., Long Island City, N. Y., for carriers operating up to 100,000 miles; Clover Farm Dairy Co., Memphis, Tenn., up to 500,000 miles, and Supplee-Wills-Jones Milk Co., Philadelphia, unlimited mileage.

Winners and runners-up in the five classes of the long-distance division were:
Class I, up to 300,000 miles—John G. Fetterolf, Buckingham, Pa.; award of honor, Harry E. Grimes, Arkansas City, Kans.; award of merit, Galveston Truck Lines, Houston, Tex.
Class 2, 300,000 to 1,000,000 miles—Barton-Robison Convoy Co., Oklahoma City; award of honor, Hershey Chocolate Corp., Hershey, Pa., Class S, one to two million miles—Kaw Transport Co., Sugar Creek, Mo.; award of honor, C. W. Kelley Transport, Hutchinson, Kans.; award of merit, Heldt Brothers, Alice, Tex.

honor, C. W. Kelley Transport, Hutchinson, Kans.; award of merit, Heldt Brothers, Alice, Tex.

Class 4, two to three million miles—Silver Eagle Co., Portland Ore.; award of honor, Missouri Pacific Freight Transport Co., Houston, Tex.; award of merit, Express Freight Lines, Inc., Milwaukee, Wis.

Class 5, unlimited mileage—award of merit, Roadway Express, Inc., Akron, Ohio.

Winners and runners-up in the six other classes of the combined local and long distance division were:

Class 1, up to 100,000 miles—Motor Truck Equipment Co., Harrisburg, Pa.; awards of honor, Aimae Bourgault, Woonsocket, R. I. and United Grocers Cooperative Association, Appleton, Wis.; award of merit, Lay Trucking Co., LaPorte, Ind.

Class 2, 100,000 to 500,000 miles—G. B. Holman & Co., Rutherford, N. J.; award of merit, Maffet Transfer Line, Elizabethtown, Ky. Class 3, 500,000 to 1,000,000 miles—Newsom Trucking Co., Columbus, Ind.; award of honor, Aetna Oil Co., Inc., Louisville, Ky.; award of merit, Blue Valley Transfer Co., Kansas City, Mo.

Class 4, one to two million miles—Pacific Transport, Inc., Bellevue, Wash.; award of honor, Alton Box Board Co., Alton, Ill.

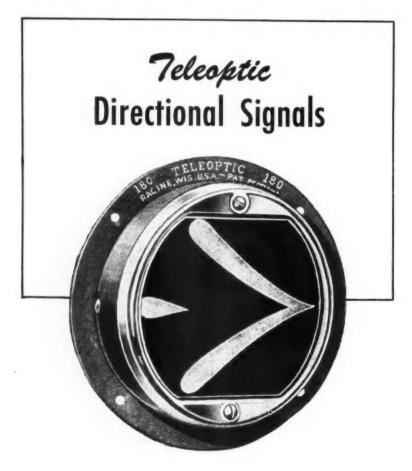
Class 5, two to three million miles—Coast Line Truck Service, Inc., Watsonville, Calif.

Class 6, three to five million miles—Best Motor Lines, Dallas, Tex.; award of honer, Cushman Motor Delivery Co., Chicago; award of merit, The Transport Corporation, Blackstone, Va.

Judges in the safety contest were Nor-

Judges in the safety contest were Norman Damon, vice-president, Automotive Safety Foundation; Colonel A. B. Barber, transportation director, U. S. Chamber of Commerce, and George R. Wellington, chief, section of safety, Bureau of Motor Carriers, Interstate Commerce Commission.

(TURN TO PAGE 180, PLEASE)



A Complete Line-Properly designed for every type of vehicle. Precision Built for maximum Efficiency and Durability.

Write for New Catalog and Installation Diagrams

TELEOPTIC COMPANY 1245 MOUND RACINE, WISCONSIN

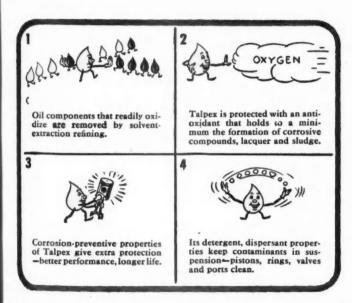


The Regal Brewing Co., New Orleans, La., recently placed in service this tandem truck and trailer unit to distribute to its warehouses throughout the South. 976 cases of beer are carried on each trip, averaging 200 miles one way. This trailer is a 31-ft. Trailmobile Tandem, powered by a LF Mack with Tructor third axle attachment

Ост



THESE FOUR TALPEX PERFORMANCE FACTORS SAFEGUARD HIGH-SPEED DIESELS



THAT'S perfectly good engine oil being removed from lube oil "stock" that is destined to become Shell Talpex. Perfectly good, that is, except for its bad habit of quickly "mating" with oxygen. Such oxidation would result in the formation of corrosive compounds, sludge and lacquer—all bad for your engine.

Shell uses a special solvent-extraction process to take away these readily oxidized compounds. Next, the refined Talpex is further protected with an antioxidant, and is given corrosion-preventive and detergent properties.

If the oil you are now using doesn't have these four performance factors, your Diesels aren't getting the benefit of all that's new in lubrication—and you had better change to Talpex!

The Shell Lubrication Engineer will give you sound advice about the lubrication of any type of Diesel, whether slow, medium, or high speed. Write for a copy of Shell's booklet, "The Fundamentals of Diesel Lubrication." Shell Oil Company, Incorporated, 50 West 50th St., New York 20, N. Y., or 100 Bush St., San Francisco 6, Californiá.

SHELL DIESEL LUBRICANTS



ASSOCIATION



From a wealth of knowledge and exacting effort comes the perfect product that gives the greatest satisfaction!



Use postage-paid card inserted at page 59 for free information on advertised products

COMMERCIAL CAR JOURNAL

Fol

Octo

MEANS EVERYTHING

OTORISTS and truck owners, thanks to the war necessity of developing tough, super-quality tires from synthetic rubber, are today offered tires which not only equal the prewar product, but in many respects are far superior.

These better tires are the result of development and exhaustive tests conducted during World War II by well known rubber companies in cooperation with the United States Government. Mansfield Tire & Rubber Company was an active paticipant in this research, creation and perfection of synthetic tires.

Tire buyers now are offered the benefits from Mansfield's important part in developing the better tires of today.

For dependable performance and low cost mileage MANSFIELD, CENTURY, RICHLAND and UNITED Tires, all made by Mansfield, are unexcelled.

Mansfield's jobbers are more than distributors of merchandise. They, also, are arbiters of quality...value... price. By independent choice and through deserved confidence of jobbers, dealers and users, tires made by Mansfield have earned their enviable reputation for service and dependability.

THE MANSFIELD TIRE & RUBBER CO. . MANSFIELD, OHIO



u

INSULATED BODIES

(CONTINUED FROM PAGE 47)

braced with steel angle irons. Inside plywood is next applied, then the outside plywood and, finally, metal over the outside plywood.

Ice Cream and Butter Bodies

ON the insulated ice cream and butter bodies, however, the building routine is slightly different. The in-





Clean appearance and attention to small details is evidenced by these rear views of ice cream and butter bodies. Channel iron bumpers are home fabricated

Unretouched, action photo of car, traveling at 28 M.P.H., as clocked by motorcycle policeman, when signalled to stop by Chi William Chief of Police, liam O. Freeman*. Brakes were applied as photo was taken.



MILEY BLACK GOLD

Stops Cars Faster by actual test!

RE'S PROOF

Car shown coming to a safe, smooth stop, just 19½ feet from the spot where Chief Freeman gave the stop signal shown in above photo. This is one foot longer than length of car—bumper to bumper—and indicates the extra safety margin of Miley Black Gold Brake Linings after a year and a half of constant wear.

sulation, cork, goes on the floor first. This is covered with copper, as shown in Fig. 4. The studs are then built right on to the box with more steel angle irons, and Fiberglas put in between the studs in a tight fit, as shown in Fig. 2. Fiberglas and kapoc are used on the top. The outside plywood and outside metal are then applied, and the roof is finished last.

Mounting Procedure

COMPLETED bodies are mounted on chassis by hoisting with jacks. Angle irons, 1/2 in. thick and 21/2 in. wide, are welded right to the chassis. Bolting is kept to a minimum in order not to weaken the chassis by boring holes in it. Welding the angle irons to the chassis prevents any backward and forward slipping motion of the body.

are

This type attachment has stood up under severe punishment. One fully loaded truck had a bad spill on the road. The body slid on its side, wearing the metal and wood right through, but the chassis attachment and body structures remained as firm and steady as ever.

After the bodies have been mounted, a 16 gage steel skirting is put on ice cream and butter bodies. No plywood is used to back the metal, as in the remainder of the body, so as not to complicate "bumping out" a section of skirting if ever necessary. A 3-in. rub rail, to prevent rubbing against docks, is built on the

(TURN TO PAGE 123, PLEASE)

*Wm. O. Freeman was Chief of Police in Evanston, Ill. in Evanston, iii when it won the National Safety Council Award in 1933, 1934 and 1936 as the safest city of any size in the U.S.

To whom it may concern:

in the Village of Maywood, Illinois, the following test two traffic officers, W. C. Mood and E. F. Gibson:

A 1941 Packard Clipper four-door sedan one year and a half, was clocked by our motorcycle traffic officer. E. F. Gibson, at 28 miles per hour-applied the brakes and came to a complete stop signal the driver immediately feet—which is one foot longer than the length of the car, bumper to bumper.

In all tables compiled by traffic safety engineers, a car travelling at 20 miles per hour-with four wheel brakes in good condition, operating on a dry road—should stop in 38 to 40 feet, which is considered a safe stopping distance.

1060 W. Adams St.

the most outstanding safety performance I have ever vitnessed. Consequently we are equipping our police cars with Miley Black Gold brake linings. lom o treems

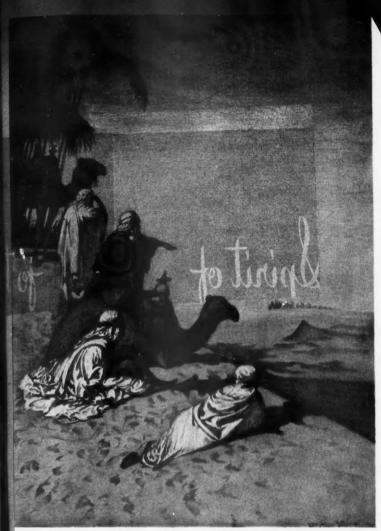
COMPANY, Inc. Chicago 7, III.

LEV

K GOLD

e Tested"

a Lining.



ts

g

ıp

le,

nt as

en

al,

at"

the

NAL

The Spirit of Transportation"

WILLIAM MARK YOUNG

, , one of the collection of interpretations made for Clark Equipment Company by twelve leading American artists.

Dependable tools of Transportation

are CLARK CELFOR DRILLS and REAMERS

Transportation from an idea into a dynamic and useful fact

SEE OTHER SIDE



INSULATED BODIES

(CONTINUED FROM PAGE 120)

outside of the milk bodies, about 34 in. from ground level.

Other Features

ADDITIONAL features of the Challenge-made bodies include such things as a small red light on the dashboard to show whether the lights in the body have been left burning; home-made channel iron bumpers, which can be made to any desired size; and folding step doors at four different places on the ice cream body and three on the butter body, behind each of which is storage space for empty cartons.

3 Men Make Body in 1-3 Weeks

CHALLENGE employs three full-time men on the body building operation. The three men are all-around workers, each doing all of the various jobs entailed; though one also doubles as a welder. They erect an ice cream body in from $2\frac{1}{2}$ to 3 weeks; a butter or milk body in two weeks; and a stake body in about one week.

No elaborate equipment is used and several items are home-made. Equipment consists of a metal brake; band saw; portable rip saw; joiner; swinging cut-off saw; drum sander (home-made); roller for rolling metal corners (home-made); electric welder, acetylene torches; and a standard assortment of hand tools.

Typical Body Costs

COST of materials for each type of body is itemized below, along with additional pertinent details of the various models:

Ice Cream Body

Overall dimensions:

Height, 68 in.

Length, 12 ft. 61/2 in.

Width, 831/2 in.

Chassis:

160-in. wheelbase; WH 47.

Weight:

Chassis, 5250 lb. Body, 5250 lb.

Overall, 10,500 lb.

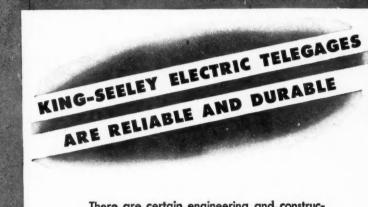
Insulation:

Top, 8-in. glass wool. Sides, 6-in. glass wool. Bottom, 8-in. cork.

Materials and cost:
Oak lumber \$ 69.00
Wall boards 23.20
Spruce lumber 41.58
Cork insulation 115.00
Glass wool insulation 148.74
Brace irons 7.00
"Wood Life," 10 gal 13.50
Paint, 2 gal 5.00
Copper flooring 75.00
Screws, bolts, nails 5.00
Body steel 48.60
Steel molding 10.58

Locks, 4 sets	36.40
Hinges, 4 pairs	
Pine lumber	
Solder	
Fenders	
Bumper	
Metal corners	
Metal skirts, braces	14.56
Channel iron, 1 in	
Door holds	

Total cost of materials . \$685.86 (TURN TO NEXT PAGE, PLEASE)



There are certain engineering and construction features of automotive dashboard instruments that experience has shown are necessary to make them reliable and durable.

They must be able to withstand voltage variation. Telegages operate within a range of from 4 to 9 volts.

They must be able to withstand vibration. Telegages are tested on a machine that vibrates in two planes up to 6000 rpm.

Diaphragms are made of metal capable of withstanding 10 million stress reversals through the entire pressure range and metal floats retain their buoyancy indefinitely.

Telegages will operate at temperatures from —10° F. to 125° F. with an overall loss in accuracy of not more than 4%.

Spun glass insulation on electric circuits provides adequate protection against damage from temporary "shorts".

Tank arms and bearings are corrosion resistant to prevent sticking.



INSULATED BODIES

(CONTINUED FROM PAGE 123)

The ice cream body has a copper floor, extending 8 in. up on the sides. Refrigeration is ammonia, Kold Hold type. Experience has shown kapoc to be best for insulation, but this is difficult to obtain. Slatting strips are laid on the bottom, about 1 in. off the floor, for air circulation. The advantage of cork as bottom insula-

tion is that in case of a hole or leak through the copper, the cork won't soak up the water. This bottom is laid in an asphalt base to protect it from moisture. This body is loaded from the side.

Milk Body

Overall dimensions:

Height, 80 in.

Length, 14 ft. 1/2 in.

Width, 80 in.

Chassis:

178-in. wheelbase; WH 48.

Weight:

Chassis, 5200 lb. Body, 1940 lb.

Overall 7140 lb.

Insulation:

Only on top—2-in. cork, to protect from heat of the sun.

Materials and cost

laterials and cost	
Oak lumber	\$49.50
Brace irons	9.80
Steel floor plate	65.25
Drain pipe	.60
14 gage galvanized sheets.	78.69
1/8 x 2-in. flat strip metal	1.20
½-in. wall board	82.80
Veneering, door	3.60
1 x 12 O.P. veneering	2.40
Bumper	8.40
Channel iron rub rail	13.12
Fenders, 1 pair	16.00
Cork insulation	44.80
Metal corners	5.00
Metal top	14.40
Steel molding	13.10
Door locks	2.40
Door handles	1.50
Door hinges	5.95
Door holds	1.65
Bolts, screws, nails	3.70
Solder	2.08
"Wood Life," 6 gals	8.10
Paint, 2 gal	5.00
Water guard	2.00
Body steel	25,20

Total cost of materials . \$466.24



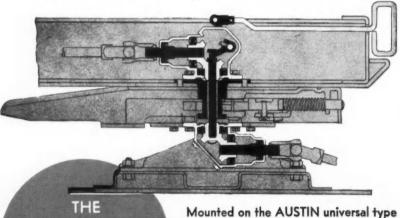
Fig. 5, Milk body, 80 in. high, 14 ft. long, 80 in. wide; weighs 1940 lb.; 2 in. of cork in roof. Material cost \$466.24

The body has dome lights, with a dashboard indicator to show whether the lights in the body are left on. Ice is used on top of crates; \(^1/4\)-in. diamond edge steel floor; 14 gage galvanized inside walls, without plywood backing. This gage metal has proved adequate to withstand wear of rubbing of heavy milk cans; \(^14\) (TURN TO PAGE 126, PLEASE)



POWER DRIVE

for HOISTS . WINCHES . LIFTS



THE

Accepted

STANDARD

Mounted on the AUSTIN universal type FIFTH WHEEL AUSTIN'S patented POWER DRIVE provides the most efficient means for transmission of power from truck power take-off to Hoist, Winch, Dump, or other power driven equipment mounted on Semi-Trailers.

For complete information on this new Auxiliary Power Fifth Wheel unit see your nearest Trailer Distributor.

AUSTIN TRAILER EQUIPMENT COMPANY

ENGINEERED TRUCK AND TRAILER PRODUCTS
MUSKEGON, MICHIGAN

GR

ele

to

cis

ag

de

Th

an

tha

Pr

00



toughness and hardness . . . tested hard-tempered tips, precision ground and shaped to prevent "chewing" and breakage ... easily grasped, OCTO-GRIP plastic handles, non-rolling and shock-proof . . . balanced design that gives you deftness, sureness and speed under all working conditions. These are the "musts" in a really good screw driver . . . and they are in every Snap-on OCTO-GRIP driver you buy.

Snap-on also makes other fine screw drivers . . . more than 75 different models, including Phillips screw drivers in both one piece and detachable head models, Reed & Prince drivers, offset and hammer head and spark testing drivers . . . in fact, every type of screw driver needed for 8026-J 28th AVENUE



0 25

24

l ft.

h a

ther

on.

in.

gage

ply-

has

vear

14

RNAL



Visual demonstration of the possibilities of four-wheel-traction, as well as scientific tests of new automotive developments, are provided for in the rugged proving grounds operated by The Four Wheel Drive Auto Co. The proving grounds provides road and operational tests under all types of driving condi-tions; research and development tests; and is used for demonstrations for visitors at the Clintonville factory of the company. Included is a one-half mile blacktop track, with a 200-ft. radius cir-cular curve, a 150-ft. radius spiral curve, a 150-ft. radius circular curve, and a 200ft. radius spiral curve. Facilities for running mudhole tests, torsion tests, sandpit tests, and hill climbing tests are also provided for on the proving grounds

INSULATED BODIES

(CONTINUED FROM PAGE 124)

gage diamond edge flooring is also used on the wheel housing, as it permits better welding. Loading is from the side.

Butter Body

Overall dimension:

Height, 68 in.

Length, 12 ft. 61/2 in. Width, 80 in.

Chassis:

160-in. wheelbase; WF 32.

Weight:

Chassis, 4500 lb.

Body, 1360 lb.

Overall, 5860 lb.

Insulation:

Top, 4-in. "Palco" wool. Sides, 2-in. "Palco" wool.

Floor, 3-in. "Palco" wool.

Materials and cost:

Oak lumber	\$50.30
Wall board	38.72
Brace irons	6.65
Steel floor plate	41.25
Flat steel	3.75
Body steel	46.02
Steel molding	15.20
Locks and hinges	11.93
Door hold	.55
Insulation tape	2.64
Wheel housing	3.90
Skirt	10.00
Fenders	15.00
Solder	3.00
Bolts, screws, nails	5.00
Insulation	33.75
Bumper	8.40

Total cost of materials . \$296.06

strevel wit

ca

Fif

The butter body also uses redwood bark for insulation; 1/4-in. plywood is used on the inside and again as backing for the outside metal. Loading is from the rear.

Stake Body

These are only occasionally constructed, when the need arises.

Channel iron or wood is used for floor crosspieces and 1/4-in. diamond edge steel plates for flooring. Oak stakes and seats are used on the sides. Stake bodies have been mounted on 1½-, 2- and 3-ton chassis, and cost of materials for a 6 ft. x 12 ft. x 60 in. high job is approximately \$250.

(Please resume your reading on P. 48)



Call nearest Rowland Distributer, He's supplied by these branches:

ATLANTA 3, Ga., William and Harvey Rowland, Inc., 449 Marietta St., N. W.

BIRMINGHAM 3, Ala., Birmingham Spring Service, Inc., 2017 Avenue B, South

CHICAGO 16, III., William and Harvey Rowland, Inc., 2732 Indiana Avenue

JACKSONVILLE 4, Fla., Jacksonville Spring & Alignment Co., 137 Jefferson St.

PHILADELPHIA 30, Pa., William and Harvey Rowland, Inc., 1414 Fairmount Ave.

PITTSBURGH 13, Pa., Point Spring Co., 419 Melwood Street

Truck Springs should be "re-engineered" by spring specialists if additional carrying capacity is necessary. To get the qualified, experienced help you need in "re-engineering" a suspension system, look to your Rowland Spring Distributor. He knows springs thoroughly-knows how to give them longer life. He offers a service that has enabled thousands of fleet operators safely to increase pay-loads, cut down road delays and reduce maintenance costs. There are nearly a thousand Rowland Spring Distributors to serve and supply you with Springs, mufflers, universal joints and wheel suspension parts. Wm. & Harvey Rowland, Inc., Frankford, Philadelphia 24, Pa.

ROWLAND SPRINGS

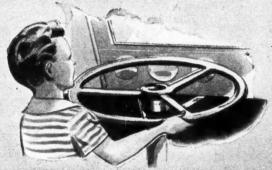


SPRINGS . MUFFLERS UNIVERSAL JOINTS . WHEEL SUSPENSION PARTS A SMALL BOY





LIKE THIS >



with MICKERS Hydraulic POWER STEERING

We don't expect a small boy to drive a big truck or bus, but his strength is many times equal to the steering effort required if the vehicle has Vickers Hydraulic Power Steering. The steering wheel turns with effortless ease, and the front wheels always follow exactly.

Moreover, no matter how rough the ground, no road shock can get to the driver. The steering wheel cannot spin, or jerk—the vehicle can be driven over the curb or through sand with no "fight" from the wheel. A flat tire will not cause swerving. The driver is relieved of the most fatiguing part of his job—enabling him to work faster and longer with greater safety.

Vickers Hydraulic Power Steering is simple, compact, easy to apply to existing chassis designs. It has automatic protection against abuse and excessive steering reaction forces. Lubrication is automatic. Fifteen years of successful operating experience on trucks, buses, road machinery, etc. have proved the value of Vickers Hydraulic Power Steering. Write for Bulletin 44-30.

VICKERS Incorporated

1418 OAKMAN BLVD. . DETROIT 32, MICHIGAN

Application Engineering Offices: CHICAGO • CINCINNATI • CLEVELAND • DETROIT
LOS ANGELES • NEWARK • PHILADELPHIA • ROCHESTER • ROCKFORD
TULSA • WORCESTER



on st

(1

AL

The GATES TRUCK BELTS You Are NOW Getting are made with

The Belts which have always given 50% to 80% Longer Wear ...

<u>NOW</u> Give You Even GREATER SAVINGS—

From the time the Gates Specially Engineered TRUCK and BUS BELT was introduced 4 years ago, the biggest fleet operators in the U. S. have consistently reported that it has given them 50% to 80% longer wear than any other belt they ever used.

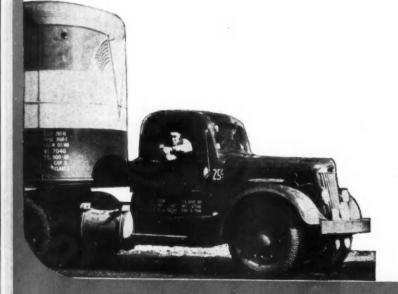
These reports have come to us as the result of careful tests conducted by the fleet operators themselves. A very large number of voluntary written statements from well-known operators establish beyond question the very substantial savings in belt costs they have enjoyed through using the Gates TRUCK BELT.

To give you even greater savings than ever before, the Gates Truck Belts you are now getting are built with Rayon Cords.

As a truck and bus operator, you know from your own experience the greatly superior service delivered by truck and bus tires built with Rayon Cords. You can appreciate at once the greater strength, durability and service life that have been added to the Gates TRUCK belt by adopting the superior Rayon Cord construction.

The savings you will enjoy through using this Gates TRUCK Belt are not confined to the very substantial savings in belt costs alone. In addition--as scores of operators report--you will save even MORE through fewer road delays, less time and money spent for servicing, less valuable operating time lost when units stand even temporarily idle.

If you want to have the lowest belt costs and most satisfactory belt service you have ever known, call your Gates Jobber right now and tell him to send you a trial order of Gates TRUCK Belts -- the one belt that is specially engineered for TRUCK and BUS service.





Truck tually, be ak TRUC much strain Truck and no

truck neere

ting a

Cord

THE MARK OF SPECIALIZED RESEARCH

THE GATES RUBBER COMPANY DENVER, U. S. A.

World's Largest Makers of V-Belts

You Wouldn't Use a Passenger Car Tire on a Truck!

Why Use a Passenger Car BELT?



MISTLETOE **MAINTENANCE**

(CONTINUED FROM PAGE 44)

tire trouble was obliged to drive over the curb at one of our agencies, thus damaging the tires. Building a driveway ended this trouble.

That's a fair sample of how we chase down any indication that puts one truck out of line with another.

We have never had a wreck or an accident that was the result of a mechanical road failure.

Besides getting the most economical operation from a maintenance standpoint, our preventive maintenance program is designed to eliminate as many road failures as possible by getting the trouble before it happens.

Conferences Aid PM

ANOTHER thing that helps our PM program is the policy of having conferences with the other department heads and the management where problems are solved.

This is particularly important in our case because our drivers do not come under our department but are employed by the traffic department. Heads from the City Pickup Depart. ment, Loading Dock, Traffic and Maintenance departments meet with the management. Here the Traffic Department might have a problem presented by the drivers that would affect the maintenance department and, conversely, the maintenance department might have a request that could be solved by the Traffic Depart.

Shop Always Clean

THROUGHOUT the shop cleanliness is stressed. One man is kept busy keeping the garage floor clean. The garage floor is painted periodically.

The greaserack is washed with distillate every afternoon. After the scrubbing, clean white sand is brushed across it and picked up to offer a slight abrasive cleaning action and to reduce slipping.

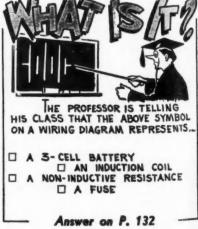
PM Routine

OUR preventive maintenance program really starts when the truck comes in at the front door of the garage. It stops there where it is gassed up and cab and interior of it is cleaned and blown out with air.

After the blowing and gassing operation at the front door the truck moves to the washrack. All trucks are washed daily.

Many Checks Made Daily

FROM there it goes to the greaserack. All trucks are greased daily. Our greaserack is in charge (TURN TO PAGE 132, PLEASE)





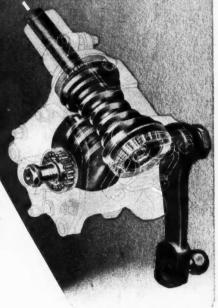


Practically frictionless, Gemmer Steering provides confort in steering, which is so important in heavy vehicles—

Important, because an overtired driver can't work as fassafe—doesn't do the job as well—as one who is protected serious fatigue. Comfort pays in work done and in greated More people steer the Gemmer way than any other. Opioneered easy steering for all types of vehicles, with the teeth that roll—liberal use of antifriction bearings.

The design is inherently sturdy—stable—banishes lost motion reduces wear to least possible minimum. Steering is always firm responsive, positive, with absence of rubbery feeling or wander. Compactness provides easy installation—saving of weight without sacrifice of overall capacity or steering arm angularity. A Gemmer Steering Gear with Reasonable Care Should Last and Give Satisfaction for the Life of the Vehicle.

STEER THE GEMMER WAY



1575

GEMMER MANUFACTURING CO. 6400 MT. ELLIOTT.

MISTLETOE MAINTENANCE

(CONTINUED FROM PAGE 130)

of a good mechanic's helper. We never use unskilled labor on the greaserack. This man has a record of the unit being greased and from that record determines whether oil should be added or the oil changed. Oil is changed mostly by the color of the oil on the stick. All units are equipped with filters. Cartridges are changed when oil is drained.

From greaserack the next operation is checking of tires for pressure and at this time tires are examined for cuts and indications of abnormal

Next it goes to the service department. Here we have from one to three men who do nothing but service work. The men who do the daily servicing do nothing else. Thus they become more adept and expert by specialization.

The service department makes daily checks of the lighting system, both regular and the emergency systems previously mentioned.

Ignition points, brakes and hydraulic brake fluid, and the steering system are checked every day.

Each week the same service men check each unit. Spark plugs are removed, cleaned in a sandblast cleaner, points are reset and accurately measured with a feeler gage and any badly burned or worn plugs are replaced with new ones.

Tappets are adjusted once each week on all the overhead jobs and this is an operation we do in our own way. Tappets are adjusted with the engine stopped, whereas most other shops adjust overhead valve tappets with the engine running.

We set the tappets to clear about .003 to .005 in. more than the factory recommendation, or about .018 in., and make the adjustment at exactly the top of the stroke with all the slack out of the timing chain or timing

For doing this exactly, I have devised a time light system using an ordinary 6-volt light. The light, shown at Fig. 5, is connected between the ignition coil and the distributor. As the engine is cranked, the light will go out when the piston is at approximately top dead center. At this point we set the tappets to clear .018.

(Of course, the high tension lead from the coil is disconnected at the distributor cap and grounded. This is to prevent the engine from starting when cranked).

This meticulous attention to setting valve tappets, which is usually such an ordinary chore, is in part responsible for our long record of 100,000 miles without valve grinding or other attention.

Factors Aiding Lubrication

TWO other factors, however, have an important bearing on this phase of our operation. One is that each week or about every thousand miles we run upper lubricant oil through the intake manifold.

(TURN TO PAGE 134, PLEASE)

■ What Is It?

ANSWER... (To Question on P. 130)

It is the standard symbol for a three-cell battery.

(Another Cartoon Quiz is on P. 134)



Well, It Isn't Always the DRIVER'S

—There are some delays he can't control, such as waiting for the load.

* The tendency used to be to blame the driver. "Frank must've stayed too long in that coffee joint down the road, arguing politics"; or-"When Andy stopped in Joe's Place for a coke, I'll bet he loafed around listening to the juke box."

BUT-much of the idle time of a truck is due to the OFFICE!! Take the Shipping Dept .- if it doesn't make the morning load ready early, the truck doesn't get away promptly. Take the Traffic Manager-if he doesn't route it efficiently, delays at traffic bottlenecks may result. But improve the office system and several ex-

> pensive trucks increase their running time an hour a day!

> Only when you find out when the delays occur and for how long, can you go after the cause. Install Servis Recorders -their charts show up all delays-idle time can't be hid-

den. Write for the full story. The Service Recorder Company, 1375 Euclid Avenue, Cleveland 15, Ohio.



A Whole Hour Lost Because the morning load wasn't Ready!



The Servis Recorder The Good Driver's Best Friend



TO THE INDUSTRY THAT TYPIFIES AMERICA!

HE automobile is America's most characteristic product. In many ways, the motor car industry has re-made America itself. Our sincere congratulations on its Golden Jubilee, celebrated this year. Likewise, we congratulate this country's fleet operators for their genius in building today's vast facilities for the economical transportation of goods and passengers by truck and bus.

Through these history-making years, we have been proud to supply Permite Pistons, Piston Pins, Valves and other parts to meet the high standards of performance established by the automotive manufacturers and by the Nation's fleet operators. Always - you can depend upon Permite Replacement Parts for the rugged quality needed to keep your fleets operating at peak efficiency. It pays to specify "Permite".

ALUMINUM INDUSTRIES, Inc. CINCINNATI 25, OHIO

MISTLETOE MAINTENANCE

(CONTINUED FROM PAGE 132)

The other factor is a change we have made on all our overhead jobs to pump the clean oil out of the filter back into the engine through the overhead valve assembly. This tends to keep all sludge washed down into the crankcase, insures better oiling of the valves and gives a slight increase in pressure to the oil designed

to lubricate valves and rocker arms.

This is accomplished by taking the clean discharge line from the filter unit, connecting a flex line and connecting it to the regular oil supply to the valves, as shown at Fig. 4. On our engines, we are able to do this by boring a hole in the block near the front head bolt and tapping it out for a ½ in. pipe connection.

The original oiling system for the valves is undisturbed, it being obtained from the front camshaft bearing through the front headbolt which is drilled. We tap into this line by drilling into the block at that point.

Everybody knows that a dry valve will burn and all these precautions insure ample lubrication. In this connection, also, one of our aims is to have our valves and rings wear out at the same time and we are reluctant to do any valve work until it is time to rering.

The reason for this is that if we have lost compression, and it appears to be in the valves, a good valve job will increase the compression. The rings being worn will permit blowby due to the increased compression. It is our opinion that the only way to do the job right and preserve all the rest of the engine parts from damage caused by blowby, dilution and whatnot, is to renew and reseat valves at the time new rings are installed.

We try to foresee how long our repairs will last and for rings and valves we have set the figure at 100,000 miles. Under our present system of maintenance they all accomplish or exceed that figure.

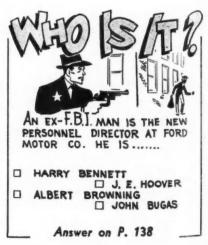
When cylinder liners show a wear of .008 or over we replace the old sleeves with new ones. We do not rehore.

We do not use reground crankshafts or any reground parts of any kind but have a fixed policy of replacing with new ones when they need replacement.

We often get better economy records and better operation from engines after they have been rebuilt than when they were new. We have one unit which has a mileage of 1,140,000 miles. It turns in just as good economy records as any of its

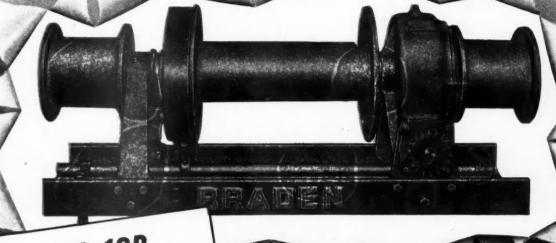
(TURN TO PAGE 138, PLEASE)





Осто

The Latest of the FAMOUS EW BRADEN "M" SERIES



M9-18B

Safe Working Load, 18,000 lbs. For all makes of trucks 11/2- to 21/2-ton capacities.

A NEW Engineered POWER TRUCK WINCH

The NEW M9-18B, the latest of the famous

Braden "M" Series of truck winches, is engineered for tough jobs and still greater safety. It has been thoroughly tested, is fully guaranteed, and is now ready for delivery. The NEW M9-18B is believed to be the SAFEST truck winch within its rated capacity. It has, as standard equipment, the NEW Oil Cooled, Fully Adjustable, Automatic Safety Brake which

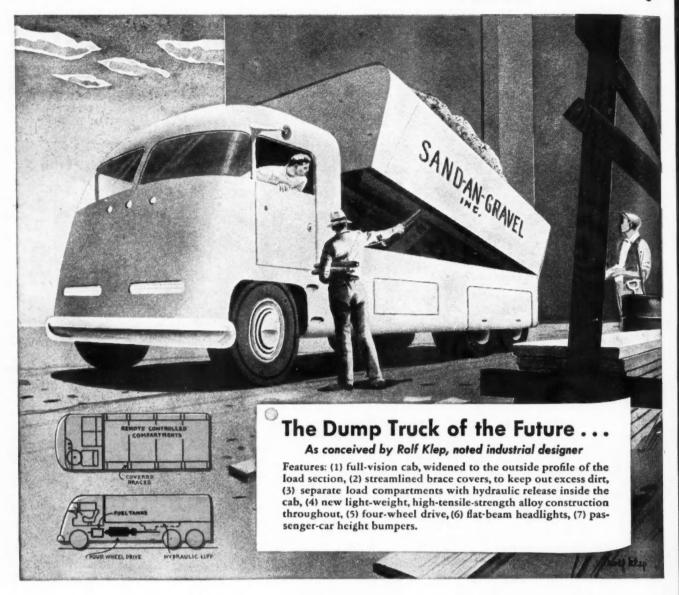
has made safety headlines for the new Models, M6 and M12. Write for

Suarancemplete information today.

1001 East Admiral Boulevard



This Truck is scheduled for future delivery



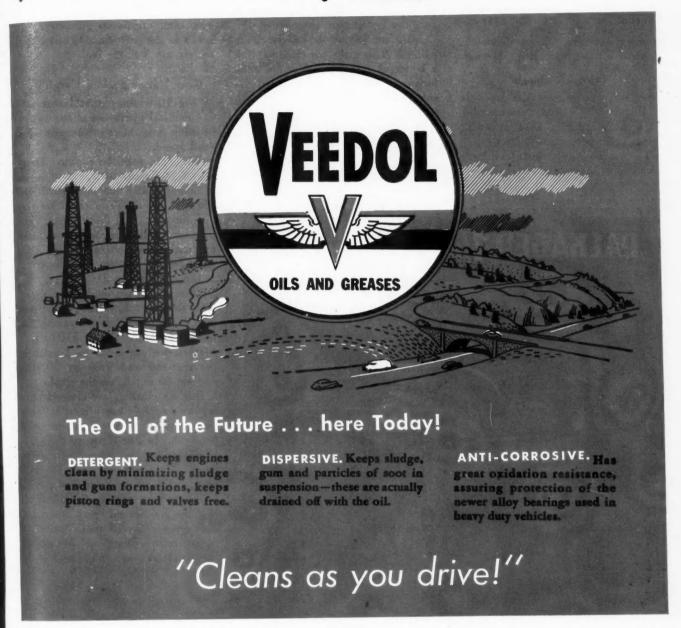
No cumbersome, pavement-cracking truck, this. It'll be big, but light and easy to handle. The dump truck of the future will be a sweeping change from the slow-rollers that clutter up today's roads . . . and it will need a new, a greatly improved motor oil.

That oil is already here!

For Veedol 90 H.D.—the oil of the future—not only has all the tough protective qualities that have always characterized 100% Pennsylvania crude... but it's also fully detergent, dispersive and anti-corrosive!

Carbon? Veedol 90 H.D. cleans it out. Sludge and varnish? This

... but its Oil is ready NOW!



oil actually resists formation of these harmful deposits. Corrosive acids? They're checked and minimized.

All these time- and repair-saving qualities are ready for you now in Veedol 90 H.D. Ready to keep the motors of your present equipment a lot cleaner. Ready to fight the engine headaches that rob your fleet of profitable mileage . . . and take money from your pocket.

Try Veedol 90 H.D. It is available now in S.A.E. 10 to 50.

Write to us for full information and prices.



17 Battery Place, New York 4, N. Y. • Thompson Bidg., Tulsa 2, Okla

MISTLETOE MAINTENANCE

(CONTINUED FROM PAGE 134)

younger brothers. It runs smooth, free and without noticeable vibration.

Major Overhauls

ON major overhauls the work is handled by a separate crew who do nothing but that kind of work. The general procedure follows.

The engine is torn down and each part is put in a vat where it is completely cleaned of all dirt and carbon. A bit of dirt measuring less than .002 back of a shell bearing will either ruin the bearing or shorten its life.

After an engine is rebuilt, it is painted. This gives our cleanup crew a better chance when they are rubbing up. While being painted an engine gray they show up the dirt when they are dirty, they also look clean when they are clean.

A major overhaul is ordered when an engine begins to use too much oil. Since we have an accurate and accumulative record of the oil costs and amount consumed on each unit, we are not taken unawares when engine wear creeps up gradually. We see it as the cost starts to climb and merely nip it in the bud.

Y

m

to

liv

br

H

it'

ne

in

ce

ex

H

Gear Ratios Picked Carefully

ANOTHER thing that favors economical operation is our system of using gear ratios to fit engine and road speed.

We begin with the engine. Every engine has a certain speed at which it operates with the most efficiency. These points are determined both by manufacturers and fleet owners. For instance, with our fleet one make operates most efficiently at 2800 r.p.m. while another make operates at top efficiency at 3100 r.p.m.

Then we buy rear-end ratios, which with the size of the tires that will give us 45 m.p.h. on the road. For instance, on one of our 3100 r.p.m. engines, we use a 6.5 to 1 ratio in the rear-end and 9:00 by 20 tires and get 50 m.p.h. on the road.

Our air cleaners are cleaned on a regular schedule every month. They are completely cleaned and the oil is renewed. In our territory there are times in the year when there is so much dust in the air that the visibility is less than a quarter of a mile. When we have this condition our air cleaners are cleaned every other day.

Engineers should make some advances in this direction. At present, the air cleaner on a small unit is the same size as that on a large unit. It is likely that if they were made large enough to do the job right as they are now constructed, the cleaner would be as big as the engine.

There also should be some progress in the ventilation of crankcases.

For satisfactory and economical operation of units on a freight line (TURN TO PAGE 141, PLEASE)

• Who Is It?

(ANSWER... To Question on P. 134)

John Bugas, new vice president in charge of industrial relations. Under Bugas, Ford intends to establish a different concept of labor relations. It is called "Human Engineering" and is an attempt to gain a closer link between big industry and its workers.

(Another Cartoon Quiz is on P. 141)



New Highway Livestock Trailers ... good to take stock in

You've heard skeptics say, "I don't take much stock in that." But even the toughest hard-boiled doubters in the livestock hauling business put on a big broad smile when they see the new Highway Livestock Trailer. They say it's good to take stock in.

Like all other Highway vehicles, the new livestock trailer is built with a thorough knowledge of the problems involved. It represents over a quartercentury of successful trailer-building experience. Highway's is a manufactur-

11

T 1. n es

a y

50 3i-

ir y.

s an link its

141)

ing rather than an assembling operation, with Highway's foundry, forge and machine shops contributing to fast action on the longest straight-away production line in the trailer industry.

Whatever your hauling problem, it will pay you to get the facts on the new Highway "Clippers" and "Freightmasters." Write for free color booklets detailing Highway's many points of superiority. For easy handling, low ton-mile cost, extra years of service, let your next trailers be Highways.

HIGHWAY TRAILER COMPANY

General Offices, Edgerton, Wisconsin Factories at Edgerton, Wis. Stoughton, Wis. Farmingdale, L. I., N. Y. COMMERCIAL TRUCK TRAILERS . EARTH BORING

MACHINES . WINCHES AND OTHER PUBLIC UTILITY EQUIPMENT is re le. dnt, he it. de as ner ess HIGHWAY ical line 34) ons. s to t of alled

HIGHWAY AMERICA'S TRAILERS



York, Pa., Chicago, Denver, Detroit, Los Angeles, New York, Philadelphia, Pittsburgh, Portland, San Francisco, Bridgeport, Conn.



AMERICAN CHAIN DIVISION AMERICAN CHAIN & CABLE

In Business for Your Safety

140

Use postage-paid card inserted at page 59 for free information on advertised products

COMMERCIAL CAR JOURNAL

there keep Since can't v carrie big en

THE loa out of keep c genera We ha the rad two sn the ho and 3 and the

operati

size of

two mi the ligh

pection new "U. on new at lower cushionin explaine enter). U. S. Tir M. Hine ldaho Fa

Wash.; Tex.; Be Ala.; Mr York Ci Cal.; W Mass., ar

MISTLETOE MAINTENANCE

(CONTINUED FROM PAGE 138)

there must be a constant trend to keep units from being overloaded. Since the maintenance department can't very well specify the loads to be carried they must keep the engines big enough for the job.

Ideas Cut Costs

THERE is no economy in overloading. We had a unit with a 90 hp. engine that was badly overloaded. We got a gasoline mileage out of this unit of 4.4 m.p.g. The upkeep cost was higher than normal.

We changed this motor to a V-12 generating 120 hp. at 3100 r.p.m. We had to add 6 in. to the top of the radiator which increased the cooling area and allowed the use of an extra 5 qt. of water. We then cut two small air scoops in the front of the hood which would help cool this new portion of the radiator. Figs. 2 and 3 show the radiator extension and the air scoops.

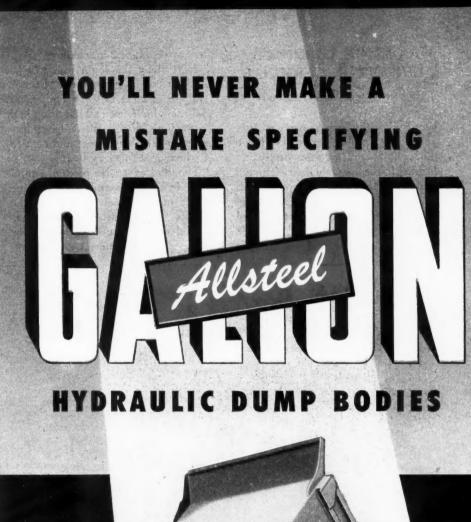
The result was normal temperature operation at all loads and speeds and two miles more per gallon of gasoline. Thus after we increased the size of the engine from 90 to 120 hp. our new gasoline mileage was 7.4 or two miles better economy than with the lighter engine.

END

(Please resume your reading on P. 45)



Tire dealers are given a preview inspection of United States Rubber Co.'s new "U. S. Royal Air Ride Tire," built on new principle of greater air capacity at lower air pressure to increase tire's cushioning effect. Tire's construction is explained by W. D. Baldwin (right, center), sales manager of company's U. S. Tires division. Left to right: Elmer M. Hiner, St. Joseph, Mo.; Oscar Mathisen, Duluth, Minn.; William M. Simpson, Idaho Falls, Ida.; R. B. Nelson, Seattle, Wash.; J. Edward Connally, Abilene, Tex.; Ben M. Wilbangs, Montgomery, Ala.; Mr. Baldwin; K. R. Schaal, New York City; Clair V. Ward, Alhambra, Cal.; Walter L. Reardon, Dorchester, Mass., and K. L. Ford, Rensselaer, Ind.





Galion Allsteel Bodies are easily mounted on any chassis. Hoist and body sizes to handle any material hauling job.

THE GALION Atlateet BODY COMPANY, GALION, OHIO

COMMON CARRIER'S UNCOMMON TERMINAL

(CONTINUED FROM PAGE 65)

shop) a drill press, a parts cleaner and a huge trailer jig made of two 30-ft. 12-in. channel iron firmly imbedded in the concrete floor. The top surface of these channel irons, flush with the floor, are drilled at 12-in. intervals with 2-in. holes and fitted with 3/4-in. slots on either side. The result is a positive and instant grip

for any standard 2-in. chain.

Next along the south wall will be found a complete front-end "board" equipped with a full array of gages and tools for front end checking and correction. There is also a wheel balancer in this department and next to it a headlight focusing board.

The most expensive piece of equipment in the shop and doubtless one of the most universally useful is the chassis dynamometer with water-braked drums mounted in the floor and portable instrument case along-

side. A complete auxiliary cooling system is also a part of the unit by means of which cold water is automatically injected into the engine under test and hot water is pumped out. Although it is beyond the scope of this article to go into the company's maintenance procedure and one of the numerous uses of the dynamometer, beyond the specific purposes for which it was designed, was demonstrated on the day the writer was in the shop. A driver brought in his tractor complaining of a "thump" in the transmission. At once the tractor was placed on the dynamometer, and without loading, was reved up to 40 miles per hour. In an instant the shop foreman had spotted the trouble in the forward universal joint.

In addition to its two 10-ton lifts, the lubrication area is noteworthy for its metered engine oil outlets (already mentioned) and for a 1000-gal drainage tank located below into which drained engine oil is quickly and cleanly disposed.

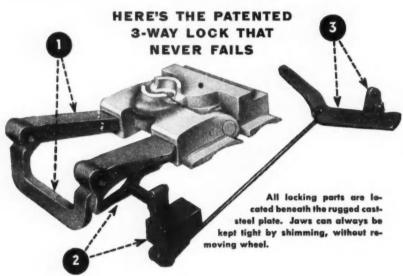
With that we are back to the parts department and the two ramps leading down to the basement. Small parts are stocked on the main floor and issued across an 8-ft. counter as requisitioned. But there is definitely not room for the larger units which are stored in the basement and easily accessible via the foot ramp which is designed to accommodate a small electric industrial truck which tows the parts up on a dolly as needed. The vehicle ramp on the outside is used for initial delivery of these large items.

(TURN TO PAGE 144, PLEASE)

You Get Safety You Can See IN THIS 5th WHEEL THAT LOCKS 3 WAYS

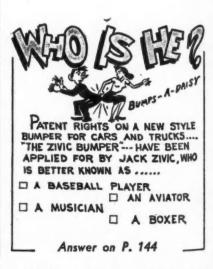


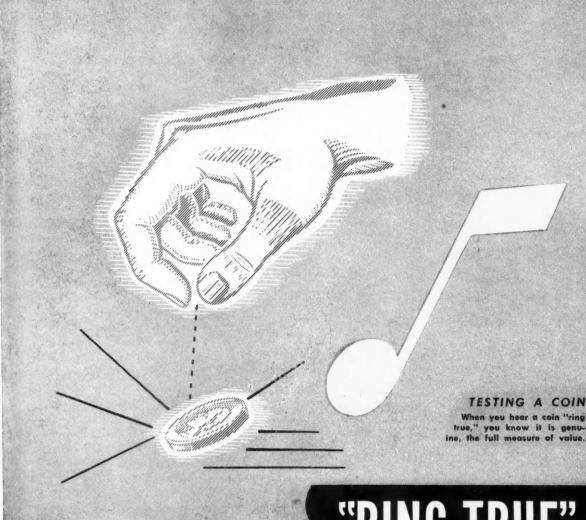
What makes a 5th wheel safe? Many things, but you can't have safety without sure protection against accidental uncoupling. You get both in the ASF Safety 5th Wheel—a product of more than forty years of railroad coupler experience.



SIMPLE AND SURE. Variations of shading show the three moving elements of the Safety 5th Wheel coupler, in *locked* position. (1) Action of gravity, and a coil spring booster, hold *two* locking arms on a downward slope against the rear king-pin jaw. (2) Near end of counterweighted cam is seated in pocket to eliminate any chance of bounce or *creep*. (3) Safety latch at operating lever prevents cam movement. Tractor pull is directly from the plate through locking arms—*not* through the hinge pins. Find out how *Safety* 5th Wheels can save you money. Write, today! American Steel Foundries, 400 N. Michigan Ave., Chicago 11, Ill.







"RING-TRUE"

IN AUTOMOTIVE PRODUCTS, TOO, "RING-TRUE" MEANS THE FINEST

If you know your automotive products, you know what the name "Ring-True" means — the finest! The finest in materials, in workmanship and in performance. You'll be seeing the "Ring-True" emblem of Clawson & Bals on more and more new products. You'll find it now on Engine Bearings . . . Reconditioned and Rebabbitted Connecting Rods . . . Bohnalite Pistons and Pins . . . Hydraulic Brake Parts . . . Hydraulic Brake Hose . . . Whip Ends . . . and Flexible Hose Assemblies for gas, oil, grease and vacuum lines. For the finest, remember — it's "Ring-True"! Clawson & Bals, Inc., 2508 S. Michigan Ave., Chicago, 16.





C L A W S O N & B A L S, I N C.
Really Complete Engine Bearing and Connecting Red Service ... Branches in Principal Cities

COMMON CARRIER'S UNCOMMON TERMINAL

(CONTINUED FROM PAGE 142)

Basement Functions

AT THE far corner of the basement under the loading platform a huge storage space provides adequate housing for such spare parts as springs, radiator cores, body parts and complete rebuilt assemblies.

Outside the storage area is a complete metal working shop equipped with power cutting tools and a sizable stock of metal bars, strips, rods, channel irons, etc. Here are fabricated necessary parts for body repairs and made of the shop's homemade specialized tools and equipment. Immediately adjacent is a smaller wood working shop fitted with band saw, table saw, planer and carpenter's tools of all description.

Coming back toward the main repair shop but still in the basement is a large section devoted to tire and tube repairs and storage. Here are installed an air-operated spreader, a pneumatic hammer for breaking loose the "tough ones," a steel protecting rack for tire inflation, a large work bench and the usual array of tire and tube repair equipment. Beyond the repair area long racks provide storage for both mounted and demounted tire assemblies.

Nearby is the boiler room which supplies heat to all sections of the building through fan-type space heaters mounted on the ceilings. Here also are located two 10-hp. air compressors piped to more than 50 outlets throughout the plant.

Separate locker rooms and wash rooms for both drivers and mechanics come next. Beyond them, under the office wing, are three large rooms devoted to the personnel and training activities. So much could be said about these activities that a separate article has been promised. It will suffice here to say that full mechanical equipment for a multiplicity of visual and reaction tests is on hand coupled with a staff of highly-trained specialists in these important fields.

"The Front Office"

AS WE mentioned in the beginning we have confined our tour mostly to the "business end" of the terminal, but perhaps there should be a word about the office wing which is only partly shown in the accompanying layout. Here is space for billing, accounting, traffic, dispatching and "O S & D" (overages, shorts and damages) departments, and in a far corner is a small office with the names "Maurice Zabarsky" and "M. J. Zabarsky" on the door. Maurice is in charge of maintenance at Cambridge and M. J., known to all as "Mickey" is sure to be on deck, though seldom in the plush office. For the Boston terminal is his baby from the first architect's sketch to the location of the smallest tool and he runs it as efficiently and as thoroughly as he planned it.

END (Please resume your reading on P. 66)

• Who Is He?

ANSWER... (To Question on P. 142)

Boxer. Jack Zivic is a member of the famous boxing family of Zivics that included Fritzie Zivic, former welterweight champion of the world.

(Another Cartoon Quiz is on P. 146)

VITAL.

...to complete cooling system care



WARNER-PATTERSON COMPANY . 920 S. MICHIGAN AVENUE, CHICAGO 5, ILLINOIS

Остов



The Brake Drum Lathe machines, grinds, and hones all types and sizes of car, bus, truck and aircraft drums. Portable for field use, stationary for the shop.

The Barrett Brake Drum Lathe is the only drum reconditioning machine available with the exclusive portable feature that brings the shop to the job — that is also a fast, accurate versatile stationary lathe for the shop — eliminates hoists and cranes — handles any size or weight wheel assembly with the tires on or off—and that makes it possible for any mechanic, without special training, to do a factory precision job every time.

A Barrett Brake Drum Lathe saves time, labor, expense — does a better job faster!

ASK YOUR JOBBER FOR DETAILS TODAY!

111

BARRETT EQUIPMENT CO.

The World's Finest Brake Service Equipment

TWENTY-FIRST AND CASS . ST. LOUIS 6, MO.

Остовек, 1946

6)

Use postage-paid card inserted at page 59 for free information on advertised products

145

ROAD CALL BOOK

(CONTINUED FROM PAGE 45)

failures; locking brakes; battery failures; motor failure; clutch trouble. Flat tires and empty gas tanks also cause many calls.

This monthly compilation of data from the sheets of the "Road Call Book" gives us a good picture of the condition of the fleet as a whole and, wherever a weak point shows, a concerted effort is made to remedy the condition. If there are too many motor failures, close attention is given to motor maintenance; too many battery failures will bring forth a "save the battery" campaign.

Flat tires, of course, are to a certain extent unavoidable; but blowouts, leaks, metal objects, etc., showing up in great profusion on "Road Call Book" sheets, will call for a hard drive on tire conservation. Empty gas tanks are also unavoidable, to a certain extent, but where one driver runs his truck dry several

times during the month, negligence can be charged. In all, we average about four or five big drives a year to clean up some outstanding trouble in our maintenance routine as reflected in the "Road Call Book."

Second Check Made

SECOND check of the monthly compilation is to determine the number of calls for individual trucks. When any truck shows an excessive number of calls during a month, it is pulled into the garage and the old fine tooth comb applied to root out the trouble. Often it is not even necessary to completely take down a motor, as the series of calls on the particular truck may lead directly to the trouble. Several fuel pump calls may require only a change of fuel pumps; constant ignition failures may require simply a new ignition switch.

Originally, the book was started to end the constant arguments between drivers and mechanics as to time spent on a job. Of course, the value of the book has broadened considerably, but the original purpose is still served. Drivers of disabled trucks used to grumble that mechanics took too long getting to the scene of the trouble and, too, had a hard time accounting for hours lost due to road trouble. With the time of arrival at the job and the time of departure noted on the "Road Call Book" sheet, and countersigned by both driver and mechanic, there's no room for argument. The driver's time is accounted for from the time he makes the call to the garage until the time

P80-L

ing St.

the w

mile la

mile r

ispowe

jet eng

"Tex"

power e winner

have evide of 5

than

Th

'Ind

grou

speed

abili

Остов

(TURN TO PAGE 148, PLEASE)



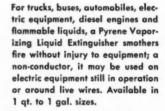
Smoke pours out; someone shouts fire; drivers and mechanics rush from the building. The fire started as a small blaze, but your trucks, shop and garage are out of operation for weeks. All the insurance in the world won't put out the fire. But insurance is just as necessary as Pyrene Fire Extinguishers at the start. Standardize on Pyrene Protection. Control of fire in all its phases has been Pyrene's business for almost 40 years. There are specific Pyrene Fire Extinguishers for different classes of fires. A Pyrene jobber will be glad to help you determine your fire hazards and advise best methods for protection from them.



Locations where oil, gas, paints, lacquers, solvents and other flammable liquids are used should be protected by Pyrene Foam Extinguishers or Playpipes which produce a fire-choking blanket of tiny bubbles. It flows freely over the surface of the burning liquid, covering the whole area of the blaze with an air-tight layer of foam.

A Pyrene Soda-Acid or Water-Type Extinguisher can keep a little fire from getting big — ideal for offices, warehouses and other indoor locations containing ordinary combustibles — wood, paper and textiles.

CONSULT YOUR
NEAREST
PYRENE JOBBER
OR WRITE
FOR ADDITIONAL
INFORMATION

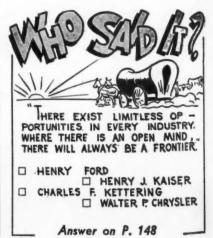




FIRE PREVENTION WEEK IS OCTOBER 6-12

Jyrene Manufacturing Company
NEWARK 8 NEW JERSEY

Affiliated with the C-O-Two Fire Equipment Co.





THE Annual Thompson Trophy Race, discontinued during the war, was resumed September 2, 1946 at Cleveland. How greatly airplane speeds have gone up in this seven-year span is graphically evidenced by the winning jet plane's average speed of 515.853 miles—232.44 miles per hour faster than any previous Thompson Trophy Race record.

The Thompson Trophy Race is known as the "Indianapolis of the Skies". It serves as a proving ground for innovations that contribute to higher speeds, greater endurance, and better maneuverability of aircraft.

Back of the romance and drama of the Thompson Trophy Race, with its daring pilots banking vertically around pylons at speeds that approach that of sound, is the serious purpose of advancing American aviation so that its citizens can travel faster, more safely in peacetime—be better armed should our country ever again be forced into war.

Thompson Products, Inc.

CLEVELAND . DETROIT . LOS ANGELES

Precision Parts for Automobiles and Airplanes. Manufacturers of the Famous Thompson Sodium-cooled Aerotype Valve and Vanes, Blades and Assemblies for the latest type Jet Propulsion Engines



ROAD CALL BOOK

(CONTINUED FROM PAGE 146)

he can go on his way again with the job completed.

The mechanic also has to hustle as any loafing around will show up on the record. The speedometer readings, start and finish, and miles travelled compared with the time consumed in getting to and from the job, keep the mechanic strictly on the route of business. However, if

there is a legitimate delay in getting started, or en route, an explanation can be given in the remarks section of the form.

Carries Emergency Kit

NO GOOD doctor goes off on an emergency call without "the little black bag"—nor does one of our mechanics go off without the emergency kit. In accordance with the most common road failures, we always keep the kit fully stocked with

an assortment of the following items; gas lines and connections; electric wire; ignition switches; fuses; light bulbs; battery bolts and cables; fuel pumps; spark plugs; ignition wire; condensers; breaker points; distributor caps; coils for various types of trucks. All the mechanic need do is slip the emergency kit into the back of the truck, and be on his way. This saves wasting of time in rumaging around the stock room for necessary parts.

The idea of spotlighting all road calls in a separate record has certainly made a fine maintenance control over road breakdowns for the Carnation Company. Six years' experience with it and a cut of about 30 per cent in average monthly road calls has made it quite worthwhile.

END

(Please resume your reading on P. 46)

PIERCE BUYS SERVO LINE

According to a recent announcement by N. M. McCullough, president of The Pierce Governor Co., Inc., of Anderson, Ind., the Pierce firm has purchased the production rights, tools, and inventory of the centrifugal governor section of the King-Seeley Corp. of Ann Arbor, Mich.

Production of the King-Seeley centrifugal governor is being moved to Anderson, and regular manufacture of the governors will be resumed there without engineering or design change.

The King-Seeley units have been marketed to engine manufacturers and to engine users under the trade-name, "Servo." They will continue for the present to be produced under the same name.

"We have no intention of making 'orphans' of any of the standard line 'Servo' governors to which we have purchased the production rights," Mr. McCullough announced. "Parts and factory service will be available under the same policy followed by King-Seeley."

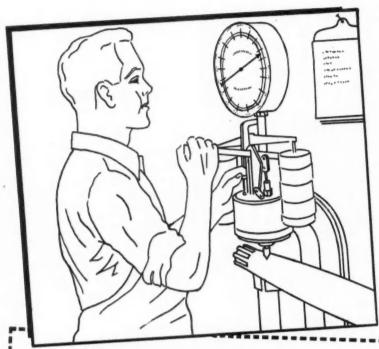
MOGULOID BOOKLET AVAILABLE

The Moguloid Co. of America, Chicago, Ill., has just published a new pamphlet on the Moguloid patented engineering method of cracked block repair. A copy can be obtained from the manufacturer by asking for Bulletin No. 26A.

• Who Said It?

ANSWER... (To Question on P. 146)
Charles F. Kettering, research
director of General Motors and
pioneer of many automotive developments.

(Another Cartoon Quiz is on P. 150)



STRENGTH TESTING

TESTING -- TESTING -- TESTING -- through each operation right down to the final packing. These highly accurate Brinell hardness tests measure tensile strength of US

Axles & guarantee each will do the job it's labeled for.

Correct design, best alloy steels, precision machining, scientific heat treatment, rigid testing make US Axles tough and dependable. At your Jobber's.



THE U.S. AXLE COMPANY, INC., POTTSTOWN, PA.

Ipscial to Fleet Owners!



You can't lose when you equip your fleet with Fram oil filters! Put 'em on—test them on the road for 90 days—and if you're not convinced that Fram filters save you many times their cost in repairs, overhauls and maintenance, your full purchase price is promptly refunded!

Why Fram Can Make This Unusual Offer

Fram filters and cartridges keep oil physically, visually clean*, thereby prevent motor wear caused by dirt, grit, sludge, and abrasives. Thus, Fram assures longer trouble-free engine life, fewer breakdowns and replacements. Fram has been tested and proved by hundreds of fleet owners from coast to coast. And Fram can guarantee savings to you because actual road tests, under normal operating conditions,

have shown that Fram does everything we claim.

Contact your jobber today and install Fram all around. If your fleet is already filter-equipped, install Genuine Fram Replacement Cartridges to get the most out of present filters. There's a Fram cartridge to fit almost every type of filter. Fram Corporation, Providence 16, R. I. In Canada:

*Certain heavy-duty oils, due to the detergent additive used, will turn dark in Certain heavy-duty oils, due to the detergent additive used, will turn dark in color almost as soon as put into the engine. Where such oils are used, filter cartridges must be changed on a mileage basis.



OCTOBER, 1946

Use postage-paid card inserted at page 59 for free information on advertised products

149

BREAK-IN STAND CUTS BREAKDOWNS

(CONTINUED FROM PAGE 55)

hours of break-in time and expect him to take the precautions necessary to care for it properly. He wants to make as much money as he can.

We found the solution to these problems in a shop-built testing block which we constructed out of the forward frame members and other parts of an old truck chassis. It is long enough to set an engine in, with clutch and transmission if desired. There are four metal legs on which are mounted small rubber wheels to make it easily portable to any part of the shop.

The stand uses a discarded truck radiator for cooling, has its own battery, gasoline tank and overhead lighting. It also features an instrument panel containing heat indicator, oil pressure gage, ammeter, vacuum gage and tachometer. In addition there is a voltage regulator, coil, throttle,

choke and switches for ignition, starter and lighting. Exhaust fumes are carried through the roof by a modern system of flexible tubing.

For additional tests, it is a simple matter to hook up a portable complete engine analyzer to obtain any desired reading.

In operating the test stand, we let the engine run under its own power at a medium idling speed for six to eight hours. This, we find, gives the rings a chance to wear in and the valves to seat properly. Then, after this preliminary run, the engine is tested by an analyzer for compression. If the compression does not run too high, we run the engine another six to 12 hours and test again. While the engine is being tested, it gets a complete check-up, with particular effort to obtain proper compression.

In this length of time we can tell whether rings and valves are seating properly, or whether the head may have to come off again for further checks. In case the compression does get too high, it is bound to burn off a little of the rings and may cause heating and expansion. But under the double test plan, overheating of any unit is eliminated. Obviously this method affords a more efficient, longer-wearing engine.

During overhaul we never put the old rod or main bearings back in, but replace them with new bearings. This is important in enabling us to obtain maximum service between overhauls. The carburetor is disassembled and cleaned; if worn parts are found they are replaced.

While the engine is being over-(TURN TO PAGE 152, PLEASE)

Quick, Effective, Economical CLEANER



QUICK - No time lost due to unnecessary scrubbing.

EFFICIENT - Cleans thoroughly, easily.

HARMLESS - Prevents injury to the body finish.

DEPENDABLE — Designed especially for truck and bus.

ECONOMICAL - Saves time and labor.

No need to wipe down after rinsing.

INEXPENSIVE - 4 oz. make 12 quarts of cleaning solution.

ASK YOUR JOBBER OR WRITE DIRECT

PROTOL

a product of

JOHN T. STANLEY CO., INC. . 642 West 30th Street, New York 1



is a

built t

trucks The

Cylind where that o of a

more

See

MIN

HE MOST EXPENSIVE MOVIE
EVER PRODUCED WAS STYMIED.
THE PROBLEM WAS TO MOVE AN ENTIRE RAIROAD ACROSS ROUGH TERRAIN
UP A 30% GRADE TO THE SCENE OF
THE SHOOTING. THE SOLUTION — LOAD
THE LOCOMOTIVES ON TRUCKS, THE MONIE....

THE GREAT TRAIN ROBBERY

DUEL IN THE SUN

GONE WITH THE WIND SANTA FE TRAIL

Answer on P. 152

EXCLUSIVE! This Relief Valve is exclusive to Mico Hy-Par! It allows the excess brake fluid to flow into the oil reservoir at any desired pressure and then to flow freely back into the cylinder when the brake pedal is released. MORE THAN **DOUBLES** YOUR BRAKING **POWER** NO BOOSTERS .. ONLY THREE CUPS NO VACUUM ALL STANDARD INSTANT **POSITIVE** MANUAL PEDAL The Mico Hy-Par Power Brake Cylinder CONTROL is a truly compound brake cylinder built to replace the master cylinder on trucks with hydraulic braking systems. INSTALLED The braking power of the Mico Hy-Par Cylinder is conventional up to a point, IN THIRTY where in mid-action it progresses from **MINUTES** that of a low pressure cylinder to that of a high pressure cylinder, thereby TIME more than doubling the line pressure. See your nearest Mico Dealer or write for our complete four color catalog.

1332 Hennepin Ave., Minneapolis 3, Minn.

INNESOTA AUTOMOTIVE, INC.

r

ng ny

ff

se

er of

ly

BREAK-IN STAND CUTS BREAKDOWNS

(CONTINUED FROM PAGE 150)

hauled, distributor, starter, generator, fuel and water pumps are rebuilt, with new parts installed wherever needed.

Our block test method gives us an engine that will stand-up for an average of 60,000 miles compared with 50,000 miles or less before the plan was put into effect. At the end of

this period, the next procedure is only to install new rings and bearings. This gives us another 30,000 miles on the average. Then the next or third rebuilding job is complete, or a repeat of the first operation. In each case the engine is given the thorough block test.

Besides raising our average mileage between each complete rebuilding job from 50,000 to 60,000 miles, or an increase of approximately 20 per cent, we have succeeded in cutting down road failures which formerly ran close to 50 to 60 per month to a present average of only 10. This has been decidedly worthwhile.

By keeping rebuilt engines in stock, three for the units which constitute the major part of our fleet and at least one for other models, we cut the truck out-of-service time from three to four days to a matter of hours. Some of our spare engines are complete with clutch and transmission to further reduce installation time.

END

(Please resume your reading on P. 56)



Speed up TRUCK LOADING AND UNLOADING

BLUE HERON CRANES

Now your driver can handle up to 1 ton without a helper!

Blue Heron Truck Cranes save loading and unloading time, help prevent accidents, save cost of sending helpers to handle heavy loads. Ideal for handling engines, transmissions, differentials, large tires, drums, transformers, castings, and heavy parts and materials.

Sturdily built with large margin of safety...two points of bearing, a radial ball bearing at base of standpipe and a bronze bearing pressed into the upper end of standpipe...friction brake for lowering load safely and quickly ...high gear ratio...rachet pawl lock ...load can be swung in full circle.

Blue Heron Cranes can be attached to any truck and are easily and quickly removed from socket, leaving truck bed clear. Many fleet operators equip all trucks with sockets which allows easy transfer of crane. Write for new illustrated folder showing how others are saving time and money with Blue Heron Cranes.

500 lb. Capacity

Half-Ton Capacity

One-Ton Capacity

\$79.50

\$128.00

\$252.50

Full Freight Allowed. Order from your Jobber.

CAM TOOL CO., INC. Oakland 12, California

TANK TRUCK CARRIERS MAKE PLEA FOR ALCOHOL TRANSPORT

National representatives of for-hire tank truck operators have urged the Treasury Department to make permanent its wartime regulation authorizing tank trucks and trailers to transport tax-free alcohol and other distilled spirits, transportation of which in tank cars and tank vessels has been authorized for years. Present authority for truck transportation expires with termination of the national emergency.

The National Tank Truck Carriers, Inc., a conference of American Trucking Associations, Inc., Washington, D. C., submitted a brief to the Bureau of Internal Revenue's Alcohol Tax Unit on behalf of all common and contract tank truck carriers. It called present regulations "discriminatory" and sought equality of treatment with the rail and water carriers.

Information developed by the ATA conference showed nine for-hire motor carriers transported 293,180,000 wine gallons of tax-free alcohol and other distilled spirits, which would have involved a tax liability of more than \$5,000,000,000 if all the traffic had been 190-proof taxable alcohol.

traffic had been 190-proof taxable alcohol. "We submit," the brief declared, "that the record of handling this large volume of traffic, when considering the daily exposure to the tax liability that might have been incurred had any substantial proportion of this been diverted, is monumental proof of the reliability, dependability, safety, and integrity of this type of carrier and transportation.

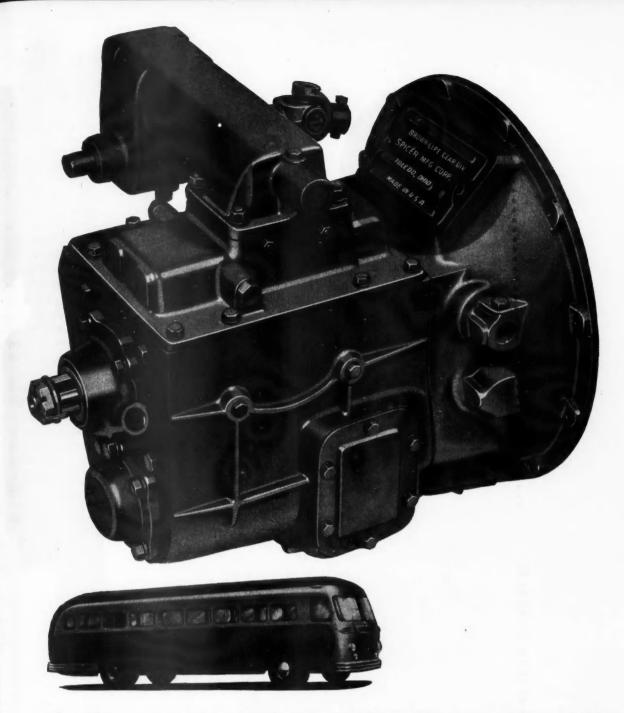
• Which Is It?

ANSWER... (To Question on P. 150)

The six million dollar Selznich production, "Duel in the Sun," dealing with the feud between the cattle barons and railroaders of 1880 Texas. Many of the scenes were filmed atop Laska Mesa, 40 miles from Hollywood. Four trucks with 175 hp. engines were used to pull the 45-ton locomotive up the hill. It took 30 hours to travel the 40 miles.

(Another Cartoon Quiz is on P. 154)

Oc7



The fleet new Kenworth Interurban Bus uses the efficient Spicer "Brown-Lipe" Transmission

Moving people swiftly, smoothly, safely will be an easy job for these new Kenworth Buses . . . they're "traffic-engineered" from stem to stern. Big, brute power is harnessed to the wheels with Spicer "Brown-Lipe" Transmissions, for utmost flexibility and economy in the steady, gruelling grind which these buses must endure in constant day and night service. Specify Spicer for satisfaction in *your* automotive equipment.

SPICER MANUFACTURING

Division of Dana Corporation
TOLEDO 1, OHIO

TRANSMISSIONS, TORQUE CONVERTERS, CLUTCHES, PASSENGER CAR AXLES, UNI-VERSAL JOINTS, PARISH FRAMES, STAMPINGS, SPICER "BROWN-LIPE" GEAR BOXES



il

rane
ol.
at
ne
exve
tal

(0)

n,**

een

lers

the ska

od.

en-45-

. It

40

54)

NAL

TRUCK ACCIDENTS . . .

(CONTINUED FROM PAGE 66)

poor material; third, using materials and parts for services for which they were not designed; and fourth, poor inspection and maintenance.

The first two are largely the responsibility of the manufacturer; the last two are in the province of the motor carrier's control. Both the maker and the user can profit by determining in what respects they were at fault for

each of the defects and causes of defects given in this report. The recommendations which follow are, therefore, mainly divided into two parts, in accordance with these two main lines of attack.

1. Brake accidents: A large percentage of brake accidents are due to hand brakes of insufficient capacity. It has been common knowledge that hand brakes were not designed so as to enable them to stop vehicles upon failure of the service brakes but merely to hold them on grades when parked. A large percentage of such hand brakes appear incapable of fulfilling even this function.

Design changes that appear necessary are: Metallic and flexible lines and fittings better designed or supported so as to be less subject to leakage and breakage; better rubber cups in hydraulic master cylinders; improvement in compressor drive belts; and better seals to protect linings against grease and water.

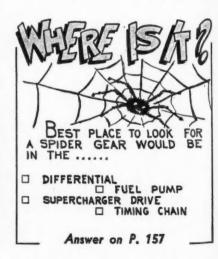
An improvement in maintenance is needed as is evidenced by the large proportion of failures due to poor adjustment. Other accidents which are almost entirely attributable to carriers' or drivers' negligence are those due to ice in valves or lines (failure to drain), valve failure (failure to test and clean), and some instances of greasy linings due to poor lubrication methods.

2. Tire accidents: The deficiencies of synthetic and war tires has been previously covered in this report.

Manufacturers are attempting to overcome these characteristics and are improving upon the tires which the exigencies of the war required them to manufacture. In the meantime, manufacturers should continue to guide the motor carriers in the proper usage of synthetic tires, and should continue development work on tires especially designed for motor carriers. The greater availability and use of crude rubber is expected to contribute to this end.

Motor carriers are, in general, aware of the main causes of tire failure—overloading and/or excessive speed. The remedy is obvious.

Other failures are due to failure to properly inflate, failure to remove (TURN TO PAGE 157, PLEASE)







To solve any bearing problem THINK FIRST OF Monmouth



MPA Good Man

THE Monmouth engine bearing line is complete—not only for popular volume-produced passenger cars, but for all heavy duty vehicles used in highway or off highway service.

For example—the bearing set illustrated is complete for I. H. C. trucks powered with the famous 318-361-450 Red Diamond Engines. It consists of the 6 rod bearings (CB266) and 7 main bearings—MB01093 (1), MB01094 (5), MB01095 (1), a total of 13 engine bearings, with necessary thrust washers for the

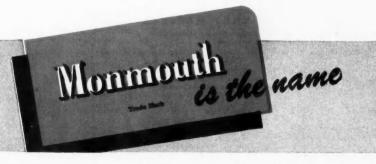
main bearings. These sets are supplied in sizes to meet all conditions; that is, standard, undersize or semi-finished.

Quality is unexcelled because produced by America's largest maker of engine bearing, to exactly the same standards as original equipment.

Distribution through N. A. P. A. Jobbers, coast to coast, provides the most efficient, economical service. For engine bearings, THINK FIRST OF MONMOUTH.

MONMOUTH PRODUCTS COMPANY . CLEVELAND, OHIO

FOR ENGINE BEARINGS
CLUTCH PLATES AND PARTS
CHASSIS PARTS





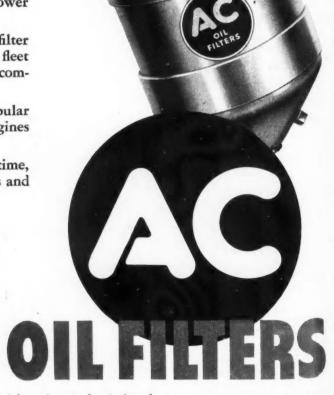
Remove the dirt and grit from dirty oil and it becomes a good lubricant again—ceases to steal engine power and cause excessive wear.

Every engine needs the protection of a good oil filter and AC has solved the filtration problems for fleet owners with *better* Filters and Elements for commercial use.

AC makes specially processed Elements to fit all popular sizes of Filters; and Filters, in three sizes, to fit engines of all crankcase capacities up to 30 quarts.

Save oil, fuel, repair costs and loss of operating time, by keeping oil *cleaner*, *longer*, with AC Oil Filters and Elements.

SEND	FOR	AC	SHOP	MANUALS	CCJ-10
Field Service Deat., A 910 Mott Foundation I Gentlemen: Please	wilding,	Flint 3,	Michigan		uals checked:
☐ How to Service Spender HOW TO SERVICE ☐ How to Service Spender ☐ How to	ark Plug	Cleaner	r ☐ How to	Service Fuel Pur Service Air Clea Service Speedom her Instruments	nps oners eters
NAME			2 1 1		
FIRM.			-		
STREET ADDRESS					
CITY				STATE	



for ure tir

pa

Tr

pr

ria

ca to

fue ly an illi In en

de

ph

he

bu

lea

tha 81

all

79 da

dia

ch

00

TRUCK ACCIDENTS . . .

(CONTINUED FROM PAGE 154)

foreign objects in the tires, and failure to properly match and mount tires. A proper inspection and maintenance system, such as the "Comparative Air Loss System" recom-mended by the Office of Defense Transportation, will do much to prevent road failures.

3. Engine accidents: On the whole, defects in engine design result in fairly few accidents. Improvement appears necessary in wiring systems and fuel pump diaphragms. The material used in cylinder-head gaskets and connecting-rod bearings could he bettered but it is believed that improvement in these devices will come with the availability of proper mate-

Other defects are obviously carrier caused; many wiring defects are due to carriers' makeshift arrangements; leaky gas and water connections can usually be spotted by even the most cursory examination; ice and dirt in fuel pumps and carburetors are largely eliminated by attention to strainers and filters.

The economies of safety are well illustrated by the following figures. In 1945, some of the main causes of engine failures were as follows: Distributors (chiefly points), +13 accidents; fuel pumps (mainly diaphragms), +41 accidents; overheated engines, +11 accidents; carburetor defects (chiefly dirt and leaks), +22 accidents.

On the basis of the assumption that casualties and damage in these 81 accidents averaged the same as for all "engine defect" accidents in 1945, it follows that accidents due to these four causes resulted in 14 fatalities, 79 injuries, and \$103,518 property damage. How many distributor points could be replaced, fuel pump diaphragms changed, thermostats checked, and carburetors cleaned for \$103,518?

Where Is It?

ANSWER ... (To Question on P. 154)

The spider gears are on the small differential pinions licated on a shaft or spider inside the differential case.

(Another Cartoon Quiz is on P. 158)

4. Steering accidents: The continued failure of large numbers of any particular kind of device is indicative that the device is not entirely suitable for the purpose to which it is being put. This statement is particularly applicable to ball and socket joints in steering systems. Any design which requires more frequent adjustment and more attention than motor carriers are likely to devote to such a device cannot be said to be a good design. The attention of manufacturers is directed to the 105 accidents during 1941-1945 caused by defective ball and socket joints.

Motor carriers also should pay more attention to the steering system; the adjustments are simple and easy to make and the savings in tire wear are in addition to the accident prevention compensation.

5. Springs and associated parts: Spring failures are most dangerous when they occur on front springs, since such failures usually affect steering control; this is especially the case

(TURN TO NEXT PAGE, PLEASE)

OUT OUR WAY



SOL-SPEEDI-DRI FOR SLICK, SICK FLOORS!

Put Sol-Speedi-Dri down, and you've got a non-skid carpet of safety underfoot . . . safe for walking, safe for working! What's more, Sol-Speedi-Dri soaks up oil and grease as a blotter soaks up ink . . . makes floors as dry as a bone . . . as clean as a whistle.

Sol-Speedi-Dri . . . the white, granular oil- and grease-absorbent . . . is easy to use. No complicated machinery . . . no trained personnel . . . is needed for its use. One man to spread it over greasy, dangerous floors . . . the same man to sweep it up after it's done its work. That's all!

SUPPLIERS:

East-Safety & Maintenance Co., Inc., New York 1, N. Y. South, Midwest & West Coast-

Waverly Petroleum Products Co., Philadelphia 6, Pa.

Pin your card to this advertisement and mail today for full details and a free, gen-erous sample of Sol-SPEEDI-DRI.



OIL AND GREASE ABSORBENT



TRUCK ACCIDENTS . . .

(CONTINUED FROM PAGE 157)

on buses. Manufacturers could make springs safer by having double-wrapped eyes instead of the present general practice of wrapping only the main leaf. Provision could be made by bumper blocks to prevent the chassis from dropping on the wheels in event of spring failure. Many spring failures could be detected prior to total failure.

Motor carriers should pay careful attention for incipient cracks, broken leaves, loose U-bolts and proper shackle lubrication.

6. Wheels and associated parts: Wheels come off because studs shear or nuts loosen. The shearing of studs is due almost entirely to loosening of lug nuts.

Why should lug nuts loosen?

The blame lies partially upon failure of drivers and mechanics to tighten properly, and partially upon manufacturers for failure to design nuts that will not loosen after once being tightened. Inspection of some clincher lugs has revealed them to be made of cast iron which is not deemed a suitable material for these devices.

7. Light defects: Light defects are mostly attributable to short circuits in trucks and tractors. Dash wiring is particularly to blame.

While the majority of such failures are due to wiring changes by carriers subsequent to manufacture, there should be less necessity for such changes. Why should not a few extra contact posts be installed on the engine compartment electrical panel for use by carriers in installing additional electrical devices, instead of having to attach additional wires on already crowded connections under the dash?

Light switches do not seem to be as reliable as is desirable.

8. Coupling devices: Fifth-wheels appear to be reliable mechanical devices with two exceptions; the devices for attaching the lower half to the tractor should be stronger than those presently being used in numerous installations; and safety locks fail too often.

Consideration will be given to requiring, through regulation, minimum strengths and other pertinent requirements for fifth-wheel attachments and automatic safety latches.

Tow-bars do not appear to be inherently as safe a means of coupling as fifth wheels. While the total number of accidents is comparatively small, it is disproportionately large in relation to the number of units thus operated. Many temporary towbars used in drive-away operations are inadequate for the service in

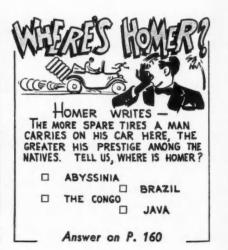
(TURN TO PAGE 160, PLEASE)



Avoid delays...danger...embarrassment. You can use and recommend CLAW Tire Chains with confidence. Columbus-McKinnon Chain Corporation, General Offices: Tonawanda, N.Y., Plants at St. Catharines, Ont., Can. and Vereeniging, So. Africa.

CHAINS

ORDINARY CHAINS



TIRE CHAINS

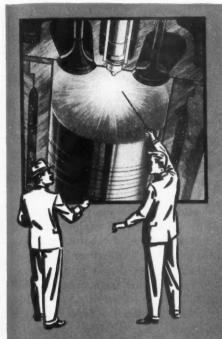
PASSENGER CARS,

TRUCKS and BUSES

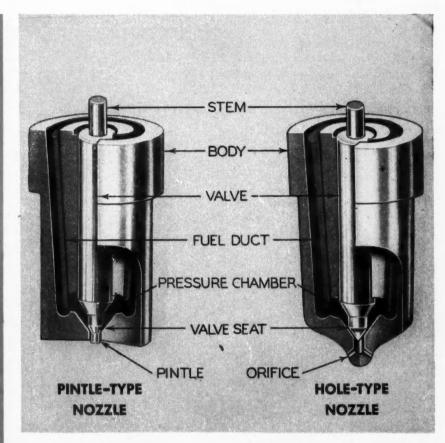
Ост

GOOD FUEL INJECTION

Requires a Tailored Spray



THE MAIN FUNCTION of an injection system is to deliver fuel to the angine cylinders in such a manner that it will burn efficiently. That's why the injection nozzie is so important. It must produce a spray that moets exactly the combustion-chamber requirements.



Tailoring is the art of producing the precise spray characteristic which the engine likes best. Tailoring know-how comes from long experience in correlating the selection of every part of the injection system for the single purpose of providing the engine with the ideal spray pattern.

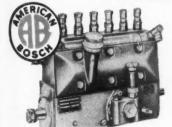




THE CORRECT PATTERN PAYS ITS WAY. American Basch Injection Equipment provides tailored fuel sprays to fit your Diesel's combustion chamber. That means fuel economy, power to suit the task at hand, and satisfactory performance under all operating conditions.



WRITE FOR A COMPLETE DIRECTORY OF AMERICAN BOSCH AUTHORIZED SERVICE STATIONS



AMERICAN BOSCH CORPORATION, SPRINGFIELD 7, MASS.

AMERICAN BOSCH Diesel Fuel Injection

Остовек, 1946

Use postage-paid card inserted at page 59 for free information on advertised products

159

TRUCK ACCIDENTS . . .

(CONTINUED FROM PAGE 158)

which they are employed. Consideration is being given, at present, by the Bureau of Motor Carriers to recommendations for the establishment of more stringent specifications for towbars and saddle-mounts used in drive-away operations.

9. Fuel line defects: Although listed in this report as "fuel line defects," the majority of such defects

are not the result of failure of the line itself. Failure to keep fuel clean, with resulting dirt, water, and ice in the line, is responsible for almost half the accidents caused by fuel line failure. Filters and sediment bowls must be properly serviced if they are to function properly.

Vapor lock is chiefly due to failure to properly design and protect the fuel line; and breakage is due largely to improper support of the line or improper fittings. Long-shanked couplings are less subject to vibration breakage than short couplings.

10. Axle and differential failures: The weak points of axles, as indicated by the accident figures, are axle shafts, differentials, and front axles of power units.

Seven of the 10 axle shafts which failed in 1945 were on tractor-semitrailer combinations; one was on a truck-trailer; one on a bus; and one on a tractor-semitrailer-trailer combination. This indicates the desirability of providing vehicles used as power units of combinations with stronger axle shafts than for similar units on straight trucks.

11. Other defects: Inspections made during the past year confirm statements made in prior years that without an exhaust defect there will be very few, if any, carbon monoxide victims.

Manufacturers, especially of buses, should carefully design floors and rear walls of rear engine buses, to prevent leakage of exhaust gases into the passenger compartment even if an exhaust defect should permit gas to escape. In one instance, a missing holddown screw from a cover plate for an under-the-floor engine was sufficient to cause a fairly high concentration of carbon monoxide to enter.

Carriers should examine exhaust systems carefully for leaky gaskets, cracked exhaust pipes, and defective mufflers. Drivers should be continually cautioned against sleeping in cabs with engines running.

The main causes of battery defect accidents are "dead" batteries and disconnection of battery cables. While these are chiefly evidences of maintenance deficiencies, some improvement might be made in the conventional clamp used to attach the cable to the battery terminal.

Transmissions and driveshafts are fairly dependable. Most transmission defects are due to sudden breakage; other defects are undoubtedly noticeable prior to failure. Carriers should carefully check transmissions which "slip out of gear," "shift hard" or "howl".

(TURN TO PAGE 164, PLEASE)



Triad 60, an alkali cleaner compounded by Detrex, is used in hundreds of garages and automobile maintenance shops for economical, speedy stripping of road dirt, oils, and greases prior to engine overhaul.

Engines are torn down; then small, basketed, ferrous-metal parts and entire motor base assemblies are cleaned in Triad 60. High wetting and easy rinsing speed the overall maintenance job. Hand wiping is eliminated.

Detrex field representatives can suggest cleaning processes to answer your individual problem. Consult one today.



• Where's Homer?

ANSWER... (To Question on P. 158)
Java.

(Another Cartoon Quiz is on P. 164)



For Complete Wiring Service —
NO. 7515 SOLDERLESS TERMINAL
ASSORTMENT

Belden Automotive WIRE

BATTERY CABLES · · · LIGHTING WIRES · · · SPARK PLUG WIRES

Your NAPA Jobber is a Good Man to Know!

NATIONAL AUTOMOTIVE PARTS ASSOCIATION • DETROIT 1, MICHIGAN

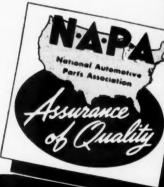
DIT

PUI

proving, day after day, by their actual performance. The quality of the parts the NAPA jobber sells—for cars, trucks and buses of all makes—is doubly assured. The delivery he gives—even on parts only occasionally needed—is speeded by master, stocks in NAPA Warehouses, within overnight shipping distance. The service he gives is completely cooperative—just as you would expect from an independent business man whose success is completely allied with yours.



is the largest Independent Parts Organization in the Industry!



AMERICAN ARTIN-SENOUR

BRAKE FLUID

ARTIN-SENOUR

BROWN

LICE GRAPHO

ARCHITICAL SERVER

MONMOUTH

PRODUCTS

ENGINE BEARINGS

BROWN

LICE GRAPHO

ARCHITIAN

ARCHITIAN

ARCHITIAN

ARCHITIAN

ARTIN-SENOUR

MARTIN-SENOUR

MARTIN-SENOUR

BROWN

LICE GRAPHO

ARCHITIAN

ARCHITIAN

ARCHITIAN

ARCHITIAN

ARTIN-SENOUR

MARTIN-SENOUR

MARTIN-SENOUR

BRICANICA

BROWN

LICE GRAPHO

ARCHITIAN

ARCHITIAN

ARCHITIAN

ARCHITIAN

ARCHITIAN

ARTIN-SENOUR

MARTIN-SENOUR

MARTIN-SENOUR

MARTIN-SENOUR

BRICANICA

BROWN

LICE GRAPHO

ARCHITIAN

ARCHITIAN

ARCHITIAN

ARCHITIAN

ARCHITIAN

ARCHITIAN

ARTIN-SENOUR

MARTIN-SENOUR

MARTIN-SENOUR

BROWN

LIMING GRAPHO

ARCHITIAN

AR

TRUCK ACCIDENTS . . .

(CONTINUED FROM PAGE 160)

Driveshaft failures are about evenly divided between universal joint failures and shaft breakage. Design features seem to be adequate except that, in 1945, two new vehicles engaged in drive-away operations failed; one due to universal joint failure and one to propeller shaft breakage. Drive-away operators should carefully inspect all vehicles

since it is evident that "new" vehicles are not "perfect" vehicles.

Clutch failures are seldom the cause of accidents. There seems to have been some unsuitable steel used during the war but, fortunately, defects were usually caught before failure.

"Throttles," "windshield wipers," and other defects causing relatively few accidents are mechanically dependable, as is shown by the very fact that few accidents are attributable to defects in these items.

Coordinated Effort Required

THE mechanical defect problem is divisible into many components. If a solution is to be found, it will require the coordinated effort of each of those parties severally concerned.

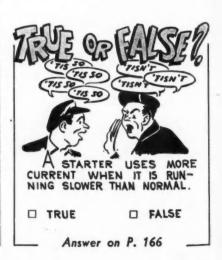
Manufacturers must see that their products are designed and manufactured with a view toward safe and reliable operation over long periods. If possible, designs should be such as to require as little maintenance as possible, and what maintenance is required should be capable of rapid and simple accomplishment.

Motor carriers must institute systematic inspection and maintenance practices and properly repair defects which are brought to their attention through such checks or through driver's reports and government inspection reports. Drivers should be trained to detect mechanically defective equipment and instructed to refuse to drive vehicles which are unsafe to operate. Drivers' trip reports should be carefully made out.

In addition to the obligations of the manufacturers and the carriers, it is the duty of governmental agencies (a) to see that motor carriers and drivers are cognizant of, and abide by, regulations which are already in effect in regard to equipment requirements, inspection, and maintenance; (b) to be constantly on the alert for new developments, good and bad, and take such action as may be necessary; (c) to keep manufacturers informed as to deficiencies in their products, either singly or as an industry; and (d) to participate in study and test to develop new specifications and designs where necessary.

END

(Please resume your reading on P. 69)





IMPROVED "GIRDER" DESIGN PROVIDES GREATER STRENGTH AND RIGIDITY

A distinctive feature of GUNITE Cast Steel Trailer Wheels is the continuous web which, in section, resembles the diagonal braces in a bridge truss. When the rims are seated on the off-set bearing surfaces, the assembly achieves a true truss construction. This provides maximum strength and rigidity with minimum weight. The complete assembly includes a specially-engineered Gunite rib-type long-life Brake Drum. The wheel is furnished with bearing cups, rim spacer, cast hub cap, and all rim-attaching parts. Gunite Trailer Wheels are available for 15000, 16000, 17000, and 18000-pound axles. Write for detailed specifications and deliveries:





GUNITE CASTINGS ... FOR TRUCKS, TRACTORS, TRAILERS, and BUSES



Armstrong's great new Rhino-Flex
Truck Tires—with rayon cord—give
you much greater strength, more
flexibility, cooler running.

BACK your trucking business with the toughest, safest, coolest truck tires ever made by Armstrong —leading manufacturers since 1912.

The carcass is the most important single factor in a tire. That's why Armstrong's amazing Rhino-Flex Truck Tires take the beating they do—mile after mile

-and still come back strong for more heavy duty.

Armstrong worked overtime during the war to develop the toughest tire carcass possible for combat vehicles. Rhino-Flex carcass was Armstrong's answer. And according to combat reports, it produced the toughest Armstrong Tire ever built.

Now you can get this great new super truck tire, with tougher, tighter twisted rayon cord, that assures you greater strength, more flexibility, cooler running. Armstrong Rhino-Flex Truck Tires are available coast to coast. See them. Compare them with any other truck tire ever made at any price. You'll choose Armstrong every time!

Manufacturers of Quality Tires and Tubes since 1912 • General Offices and Plant—400 Elm Street, West Haven 16, Conn.

ARMSTRONG RAINT TIRES





Time is money—save it by use of the CLARK Trucloader, newest of the Clark line of industrial haulage vehicles. Light, compact—yet sturdy as the famous Clipper, Carloader and Utilitruc. Let a Clark Field Engineer plan for you an efficient method of material handling—today!

Write for "Trucloader Broadside," it's free.

LIFTS - CARRIES - TIERS

GAS OR ELECTRIC POWERED

Prices on CLARK products will not be advanced in excess of increased costs

CLARK TRUCTRACTOR

Division of CLARK EQUIPMENT COMPANY

BATTLE CREEK, MICHIGAN

OTHER PLANTS - BUCHANAN, JACKSON, BERRIEN SPRINGS, MICHIGAN

Other CLARK Products

FORK LIFT TRUCKS
DUMP & SHOVEL TRACTORS
RAILWAY TRUCKS
METAL SPOKE WHEELS

TRANSMISSIONS
AXLES AND HOUSINGS
DRILLS & GEARS
ELECTRIC STEEL CASTINGS

WHITE ENGINES

(CONTINUED FROM PAGE 71)

sion ratio, and maximum torque of 350 lb.ft.

The 280A engine is L-head, 6-cyl., 45% in. bore x 5 in. stroke, 504 cu. in. displacement, rated 184 hp. at 3000 r.p.m., with compression ratio of 6 to 1, maximum torque of 405 lb.ft.

While endowed with the general features common to all engines in the line, these engines have additional features of great interest to the operator. For one thing, the intake manifolds are water-cooled and, considering the high power output, the entire cooling system is free from hot spots to permit the use of high compression heads with commercial gasoline. Higher volumetric efficiency is claimed because of better filling of the large cylinders what with the more uniform temperature range. These features also improve maintenance by increasing the life of gaskets and by reducing thermal stresses in the manifolds.

Gear-Driven Fan

AN INNOVATION on these two engines is the gear-driven fan which improves appearance, facilitates maintenance, and eliminates the large belts usually required for fan drive. It permits lowering of the fan to a more accessible location and more favorable to better cooling. The water pump and generator are driven by belt from the fan mounting.

The Centri-Vac governor standard on these engines, combines the advantages of mechanical and vacuumtype governors. A new type of oil pump with greatly increased capacity, particularly at idling speeds, has been adopted.

Cab Comfort Increased

BEFORE commenting on the features of chassis design, consider the steps that have been taken for the (TURN TO PAGE 168, PLEASE)

• True or False?

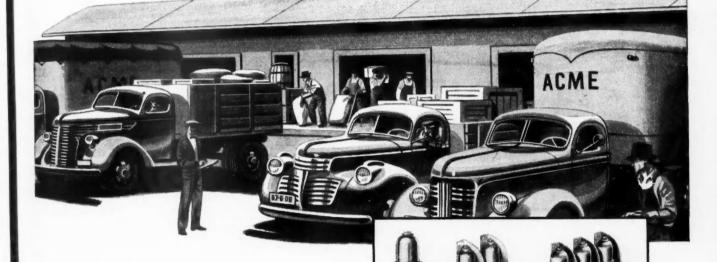
ANSWER... (To Question on P. 164)

True. The slower the starter
runs, the lower the resistance
and the greater amount of current it uses.

(Another Cartoon Quiz is on P. 170)

Mr. Fleet Owner,

THE FREQUENCY OF FUEL PUMP TROUBLE?



According to the Service Job Analysis for 1945, there were only 7 mechanical elements that more frequently needed maintenance than the fuel pump—38 other elements required less maintenance.

You know it costs money every time one of your trucks goes into the shop. Why not investigate the fuel pump problem because of its importance from the maintenance standpoint?

Here is what the Autopulse Electric Fuel Pump is and what it offers. It serves any vehicle in your fleet, regardless of make or size. It's flexible. You can mount it conveniently in the fuel line on either side of the vehicle. You can avoid vapor lock in hot weather or hard starting in cold weather. It saves fuel. It prevents stalling in traffic. It eliminates ragged acceleration after idling. Autopulse is known for its long service life.

Write us direct for quotation

AUTOPULSE Corporation

2321 Brooklyn Ave., Detroit 1, Michigan



FIRE STOPPING POWER



EXTINGUISHERS

Greatly increased fire-killing capacity.

Simplified operation.

Expert performance by inexperienced operators.

Quick, easier on-the-spot recharge after use.

More fire stopping power pound for pound, dollar for dollar.

Greater heat-shielding protection for operator.

Increased fire-fighting capacity without increased weight.

Engineered to resist corrosion.

Install the NEW Ansul-Dugas Extinguishers at all hazard spots for greater protection against all fires involving flammable liquids, gases and electrical equipment.

Ready ... in a Flash!



Simply remove ringpin and push lever down.



Open nozzle and direct chemical stream at base of flames.

53% More...

FIRE STOPPING POWER

with the NEW FASTER ACTING

ANSUL-DUGAS FIRE EXTINGUISHERS

Write today for new catalog and authoritative data showing characteristics of all types of approved hand fire extinguishers.

Listed and Approved by Underwriters' Laboratories and Factory Mutual Laboratories.

SUL CHEMICAL COMPANY
FIRE EXTINGUISHER DIVISION . MARINETTE, WIS.

WHITE ENGINES

(CONTINUED FROM PAGE 166)

11

benefit of the driver. These include basic improvements in front-end suspension as well as the adoption of a unique cab design. Cab features are the result of experiments carried on during and since the war in seating and suspension to improve the driver's posture, increase his comfort, and thus reduce driving fatigue. One result is an improved front seat construction and increased headroom in the cab.

While this reduces fatigue, it is still necessary to do something about the ventilation and comfort heating of the cab to take care of the extremes of hot weather and humid close atmosphere in winter. For this purpose, White has adopted an advanced form of controlled heating and ventilating with temperature control by an adjustable automatic thermostatic device operated by the driver. The system changes air in the cab a number of times per minute and provides a fresh clean atmosphere with windows closed, relatively free from the usual frosting of side windows.

Driver comfort, however, is tied in with improvements in front-end suspension. To this end, they have adopted twin-back front springs in conjunction with heavy-duty, doubleacting shock absorbers to produce a cushioned ride for the driver and load. Ease of control also comes from the adoption of the cam and twin-lever steering gear which relieves the manual effort in steering. Combined with improved steering geometry it reduces turning radius, increases maneuverability, and is said to promote vehicle stability under all road and load conditions, at higher speeds.

Removable Instrument Panel

ONE of the novel features of the new cab, in the interest of improved maintenance, is an easily removable instrument panel which makes accessible all of the wiring harness, cables, and plumbing when inspection or servicing is required.

Five-speed transmissions are standard in all models, while three-speed auxiliary transmissions are added on the WB-2864 and WB-3264 vehicles. Optional ratios with direct either in

(TURN TO PAGE 170, PLEASE)

"Keep off those scales," he said



MAYBE I wasn't looking where I was going. But a guy almost ran over what little is left of my tail when he drove into the American Brakeblok plant.

I figured I'd get even, so I trailed along after him when he went inside.

He went to the scale room where ingredients for American Brakeblok Brake Lining are weighed out before mixing operations. He took a bunch of tools and master-weights and started to check the accuracy of the scales. When his back was turned, I sneaked up on the weighing platform—just to give him a little trouble.

He grabbed me by an ear and threatened to stretch me out like a dachshund, but fortunately the American Brakeblok man who operates the scales rescued me.

"No tricks, Stopper. Keep off those scales! They have to be 'on the money'—that's why this man comes around regularly to check them," he told me.

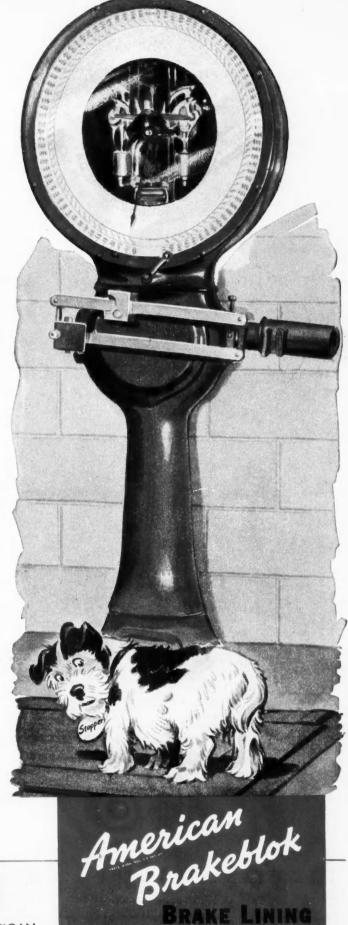
Those scales are kept in perfect accuracy. As a further move to eliminate any error, they print slips which show the quantities of ingredients weighed. This gives a complete and permanent record of everything that goes into every batch of American Brakeblok Brake Lining.

Precautions such as these are a matter of course at American Brakeblok because making completely trust-worthy brake lining is a painstaking job. Attention to every detail typifies our efforts to bring you the best brake lining that can be made.

When you install American Brakeblok Brake Lining, you can be sure your customers will be enthusiastic about the smooth stops and "soft pedal." In heavy-duty



work, fleet operators, maintenance men and drivers are equally enthusiastic about the long life (with few adjustments) and the sure stops, under all conditions, that come with American Brakeblok Brake Lining.





Distribution through 38
NAPA Warehouses



AMERICAN BRAKEBLOK DIVISION, DETROIT 9, MICHIGAN

WHITE ENGINES

(CONTINUED FROM PAGE 168)

fourth or fifth gear are available for all models.

Single-reduction, spiral bevel gear, rear axles are standard throughout the line. However, either double-reduction or two-speed rear axles are offered as optional equipment. Cast malleable iron housings are used exclusively throughout. All models feature increased brake sizes, with Ben-

dix Hydro-Vac equipment on all models, except the WB-2864 and WB-3264 which have air brakes.

Single channel frames are standard on the first eight models including the WB-28T and all frames except the WB-14 are heat treated. The WB-2264-2364-3264 have double-channel frames. In addition, frames for the MB-26-28-28T-2864-3264 are of chrome-nickel alloy steel, capable of carrying enormous loads as heat treated.

The foregoing represents a highspotting of basic features without details of the design and maintenance of the new engines and cabs. As production is accelerated on the line, we shall be able to provide our readers with more complete technical data.

END

(Please resume your reading on P. 72)

FORD AIR TEST MACHINE ELIMINATES WATER LEAKS

Possibility of oil or water leaks occurring in Ford cylinder blocks or heads is virtually non-existent due to adoption of specially-designed air test equipment now in use at Ford Motor Co.'s Rouge plant in Dearborn.

All production cylinder blocks and heads now are thoroughly air-tested in the company's motor building. This replaces the costlier and less accurate water test method formerly employed.

The Ford-designed machines simultaneously seal all orifices, pump 30 lb. of air pressure into the block or head, then immerse and rotate the casting slowly for several seconds in a tank of water. The slightest leak reveals a tell-tale bubble. Possibility of rust is averted by the addition of a rust inhibitor.

The new technique virtually eliminates all defective blocks before extensive and costly machining and build-up operations are accomplished and the engine block tested.

Californ

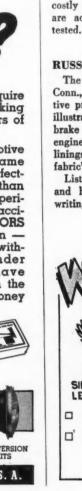
imes! \

poloxie

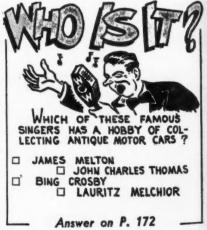
RUSSELL CATALOG OUT

The Russell Mfg. Co., Middletown, Conn., has just published a new automotive products catalog containing data and illustrations of the complete Rusco line of brake lining and clutch facings, including engineering sets, wire back bloksets, roll linings, slab stock, molded and "fused fabric" clutch facings.

Listings cover the popular sizes in truck and bus fields. A copy is available by writing to the company.









Completion of the 200-inch reflecting telescope on Mt. Palomar, Colifornia will multiply the power of the human eye one million inst! What new worlds will astronomers and astrophysicists explore next? Will they learn the secrets of the most distant tolaxies? What's the limit?

15 Porous Chrome

THE ENGINE-LIFE PISTON RING?

Frankly, we don't yet know! We do know that more than 7,000,000 miles of road tests prove that Porous Chrome multiplies ring life by four—even five! We do know that their fine honing action causes the entire set to seat within the first hour—eliminates the costly wear of the break-in period . . . cuts cylinder wear in half! Prove them for yourself—cut maintenance costs—call your American Hammered jobber today! Porous Chrome sets for bus and truck engines are ready now.

Chrome piston rings are an original American Hammered development.

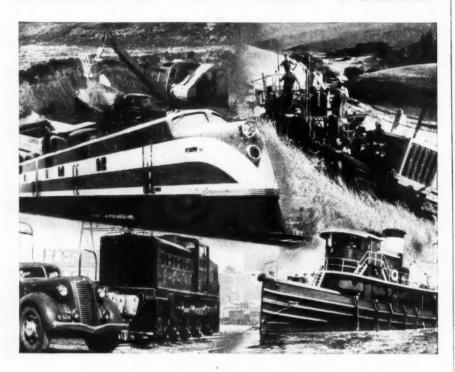
* (Van der Horst process

Koppers Company, Inc., American Hammered Piston Ring Division, Baltimore, Maryland

American Hammered Piston Rings

A KOPPERS PRODUCT

PROVED IN THE FIELD



MICHIANA FILTERS

MICHIANA Filters have been rigidly tested and proved on all types of essential equipment including marine craft and military motorized units; in stationary plants—on trucks, farm and construction machinery—on streamliners, freight and switcher locomotives. Performance checks demonstrate that they more than meet all practical field conditions for efficient filtering, durability, and servicing economy.

Engines stay clean for many extra miles of lower cost

operation when MICHIANA Filters are installed. Engine life is lengthened, oil consumption cut, and maintenance costs are reduced. You will find a MICHIANA Filter of the correct size and type for any engine, gas or Diesel—up to several thousand horsepower. Use the oil filter built on experience—MICHIANA.



Bulletins 839 and 45-D describe filters for gasoline and Diesel engines respectively—Send for copies today.

MICHIANA PRODUCTS CORPORATION

Michigan City, Indiana

MICHIANA OIL FILTERS



CUSTOM STYLED BODY

(CONTINUED FROM PAGE 57)

pockets; long side and full width rear steps; heavy wooden horizontal and vertical rear bumper rails, dark stained and spar varnished; skirt compartments for storage of unloading mats and carts; recessed tail lamp and license plate brackets.

Materials and Finish

IT IS suggested that this design be built either of all steel or composite steel and wood to best meet the requirements of ruggedness which must be built into a body for use in this type of operation.

Pistons

Pistor

iston F

iston

Valve

Wat

parts foll

tions in

estanc

Turb hea

lother t

A two-toned color arrangement as illustrated would be very effective on this design using shades of cream, straw and brown with a limited amount of red striping. The colors recommended suggest the ingredients of the product being hauled.

High Loading Efficiency

THIS basic design is readily adaptable to size variations to suit different load and capacity requirements. As an example, to illustrate possible loading arrangements covering both barreled beer and bottled beer, a body approximately 12 x 7 x 4 ft. is used in the supplementary sketches with the following results: There could very easily be carried in a body of this size 66 half barrels, 98 quarter barrels, 161 wood cases of bottled beer and approximately 182 paper carton cases or empties.

Next month's design: Retail meat or provisions delivery truck.

END

(Please resume your reading on P. 58)

• Who Is It?

ANSWER... (To Question on P. 170)

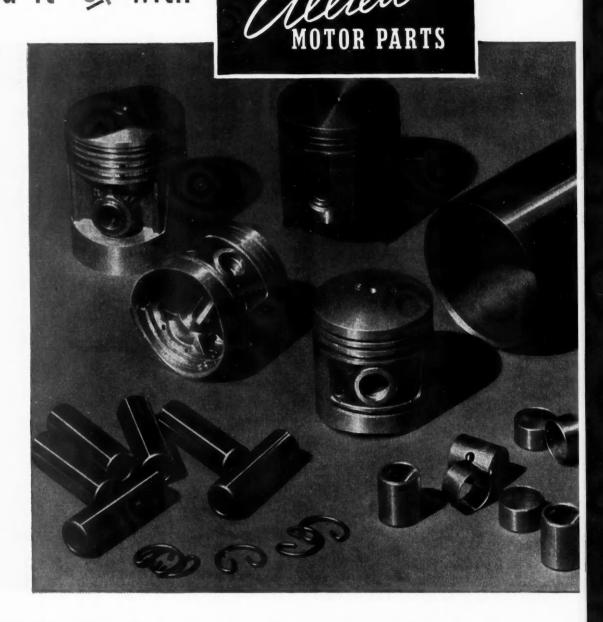
Tenor James Melton, who has a collection of more than 60 ancient jalopies, including a 1900 Locomobile steamer and a 1904 Columbus electric. Melton was recently a participant in a revival of the old Glidden Tours, driving from New York 10 Columbiana, Ohio.

(Another Cartoon Quiz is on P. 175)

When the Motor is Que... Build it when with

Pistons · Piston Pins
Piston Pin Bushings
Piston Pin Set Screws
Piston Pin Lock Rings
Valves · Valve Keys
Valve Guides
Valve Springs
cxpansion Plugs
Cylinder Sleeves
Cylinder Sleeve
Assemblies
Water Pumps
Water Pump Parts
and Packing

Allied Pistons and all related parts follow factory specifications in design. Pistons, for instance, include split-skirt, luminum, Auto-Thermic, Turb head, T-slot, U-slot and allother types used as original equipment.



ALLIED ACCURACY enables you to do the job faster . . . makes a better and longer-lasting motor for the owner.

• Allied Accuracy is the faithful embodiment in every detail from metal analysis to finished product—of the specifications which automotive engineering knowledge and long experience dictate for maximum efficiency and life.

The production facilities and manufacturing capacity of the plants producing Allied Motor Parts are unsurpassed in this industry.

Allied can be relied upon to supply you with motor parts which equal,

or better, the parts they replace.

ALLIED MOTOR PARTS COMPANY . Detroit 1, Michigan

Allied Motor Parts are quickly available from NAPA Jobbers everywhere. Master stocks maintained in 38 NAPA Warehouses



TOUGH

That's what you want in a trailer unit . . . and the trouble-free performance of Kingham Universal Trailers for years and years and years proves that they surpass industry's most sanguine expectations of trustworthy service.

Today, however, with existing shortages of materials which can meet Kingham standards, orders can be accepted for future deliveries only. Most companies, though, are waiting until Kingham Universal Trailers to meet their requirements may be had.

KINGHAM TRAILER COMPANY, INCORPORATED. LOUISVILLE, KY.



NATIONAL SALES ... NATIONAL SERVICE

we its tra of und the

sta Ta

to-

con

and

wh edg Ins

Fruehauf Featherweight Tank-Trailers Now in Production

Production of new Fruehauf Featherweight Tank-Trailers is now under way at its Fort Wayne, Ind., plant. The tanktrailer is available in standard capacities of 2000 to 6000 gal. and with a choice of underconstruction, functionally designed to the requirements of the individual tanktrailer.

Designed to carry the greatest payload, state restrictions permit, the Featherweight Tank utilizes the fewest pounds of material of the heavy gage required by I.C.C. regulations. The tank has a very high strength-to-weight ratio because it is constructed of high strength nickel alloy steel. The design minimizes the amount of welding required, with attendant reduction of possibility for leakage.

To insure that every tank-trailer will conform strictly to its rated gallonage and that each steel sheet of its exterior will fit its adjoining ones precisely, the tanks are built in massive steel fixtures. The sheets

are firmly clamped to their exact curvature and fit until they have been welded in place.

In welding the multiple sheets of steel which form the exteriors of the tanks, the edges are not joined in continuous lines. Instead, the exteriors are built up of sheets of different sizes so that their edges are staggered. This adds not only to the shear strength of the finished tank but offers no long continuous seams to invite the possibility of tearing.

CAT.

Double bulkheads serve two important purposes. They not only divide the tank into three liquid-tight compartments, but add greatly to the stiffness and strength of the tank as a whole. In like manner, the baffle heads (surge plates) serve a dual purpose. They also add rigidity and strength to the tank and they control the movement of liquid contents when the

trailer stops and starts and when its level shifts.

Fruehauf Featherweight Tank-Trailers in standard models are designed and built to haul petroleum products with the greatest possible efficiency. They meet I.C.C. specifications in all respects.

Fruehauf also has tank-trailer engineering and production facilities for economical production of specialized units. Propane, butane, casing head gas, fuel oil, bunker-C oil, asphalt, creosote, printing ink—special tank-trailers to haul all of these materials are built by Fruehauf to satisfy the needs of customers requiring special types of equipment.



Par Air Compressors handle

efficiently and economically air requirements from a single tire line to a battery of air operated appliances. Par "Air Power" lightens the load . . . makes service operations faster, easier, more profitable. For dependable economical air power, make your's Par.

See your Par Jobber for your air requirements and write for Par catalog A-46



. . . By Comparison — You'll Buy PAR

Manufacturing Corporation

General Offices, Toledo 1 . Factory, Defiance, Ohio, U.S.A.

Monroe Truck Seat Features Double-Action Hydraulic Shock

An easy-ride truck seat, designed to reduce driver-fatigue, is now in production by the Monroe Auto Equipment Co., Monroe, Ind.

The seat combines the ride cushioning action of a direct double-action hydraulic shock absorber, the comfort of a variable rate coil spring accommodating a driver of any weight, and the side-sway control of a stabilizer. Four rubber stabilizer mountings further ease jars and vibration, and

forward and backward pitching is eliminated by means of a rigid vertical guide at the rear on which the seat moves up and down on a frictionless bearing.

Like the Monroe tractor seat, the truck seat unit is designed for installation on vehicles now in operation as well as for standard equipment use. It will be sold through automotive jobbers and retailers, car and truck dealers and other wholesale and retail outlets. Unlike the tractor seat, however, the seat for trucks is fully upholstered with both seat cushion and back cushion constructed on a sturdy metal frame mounted on the easy-ride mechanism at three points and on a vertical guide at the rear by means of a frictionless bearing, insuring up and down movement in a given path. The stabilizer, made of alloy torsion bar steel, is mounted in four rubber bearings. The entire design is patented by Monroe.





Two truck seat models, both single seats and both fully adjustable forward and backward in three positions, comprise initial production. One model has seat and back cushions with coil springs similar to, but more resilient and lighter in weight than, the springs used in conventional truck seats. The other model utilizes full-depth sponge rubber on both seat and back cushions. When a full-width easy riding seat is desired in any truck cab, two single seat units of either model may be installed side by side.

In the coil spring seat, the softer cushion springs are made possible by the fact that (TURN TO PAGE 178, PLEASE)

What Is It?

ANSWER... (To Question on P. 175)

Babbitt metal, an alloy of copper, antimony, and tin (C.A.T.) It is used for bearings.

Have you tried the Quiz on P. 78



Double Feature Motor Oil for better winter service

For easy winter starting and smooth engine operation — in cold snap or mild spell — use AMALIE H-D Sub-Zero for heavy-duty fleets and Diesels. Flows freely when it's cold . . . yet clings to metal—cold or hot.

It's the complete heavy-duty oil with outstanding detergent, dispersive and anti-oxidant features plus the extra oiliness that counts in any weather.

For Winter

And remember AMALIE Lubricants (winter grade) for all vital lubrication points.



SEE YOUR AMALIE DISTRIBUTOR, OR WRITE DEPT. J10

AMALIE DIVISION L. SONNEBORN SONS, INC.

L. SONNEBORN SONS, INC.

88 LEXINGTON AVENUE, NEW YORK 16, N. Y.

Refineries: Petrolia and Franklin, Pa.

Plant: Nutley, N. J.

In the Southwest: Sonneborn Bros., Dallas I, Texas



MONROE SEAT

(CONTINUED FROM PAGE 176)

the hydraulically controlled seat mechanism eliminates much of the riding roughness before it reaches the seat itself. For the same reason full-depth sponge rubber is used with unusual results instead of a combination of coil springs covered by a sponge rubber layer. The rubber in the Monroe seat cushion is 4 in. deep; in the seat back, depth is 3% in.

With either of the new truck seat models, an "adapting package" is supplied for the purpose of fitting the seat to whatever truck model is desired. The package consists of brackets, bases and other parts necessary for an installation that can be accomplished on many models by the truck owner or in a service station in less than an hour after the old seat has been removed.

Simplicity of installation of the Monroe truck seat is illustrated by the fact that the same set of adapting parts, for example, will fit the seat to every model built since 1938 by one of the nation's leading truck manufacturers, from ½ to ¾-ton. pickup to large heavy-duty models and including cab-over-engine types.

NEW U. S. TIRE FEATURES MORE AIR, LESS PRESSURE

An automobile tire which utilizes a new principle of increased air capacity at lower air pressure will be produced by United States Rubber Co. as its first postwar premium tire.

Known as the "U. S. Royal Air Ride," the new tire will be marketed as a premium tire when government price regulations permit its release.



By combining 14 per cent more air and 8 per cent less air pressure, the U. S. Royal Air Ride tire greatly enhances the cushioning effect an automobile receives from its tires, the company states. Additional features include a flatter tread and sharply defined shoulders to eliminate the "lazy rubber" that normally tends to build up excess heat.

Laboratory and road tests have revealed that the tire runs 10 to 15 deg. cooler, thus affording greater protection against blowouts and increasing the tire's mileage.

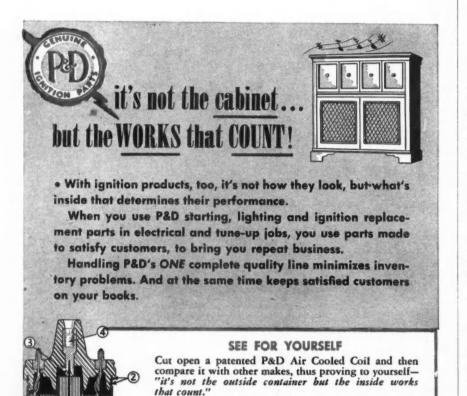
The Air Ride tire will be of rayon construction in all sizes authorized by the government. It will be characterized by different size markings, such as "65-16" instead of "6.50 x 16."

SNAP-ON CANADIAN FACTORY

Establishment of a Canadian factory at Long Branch, Ontario, the fourth production plant for Snap-on Tools Corp. of Kenosha, Wis., has been announced by President Joseph Johnson.



A new emergency field unit, which will bring to emergency areas and small towns the finest and most complete equipment for treatment of polio victims has been developed by the National Foundation on Infantile Paralysis. The mobile equipment is contained in a trailer which is pulled by a standard Reo Model 19 truck, which in turn houses the necessary power plant. Weighting over 9-tons with an over-all length of 44 ft., 8 in., the unit is equipped with an iron lung, hot pack machine, resuscitator, aspirators and all other necessary equipment



U S Par No 102001

One piece ribbed aluminum air-cooled can. The ribbed fins assure sufficient surface to dissipate hear generated in coil windings, assuring uniform performance during operation.
 "Perma-Sealing" method of sealing bakelite top to can making an absolutely moisture proof seal.
 Patented high tension insert, eliminates soldered wire joint thus assuring against breakage by vibration.
 High tension terminal, solid brass insert molded into

5. Secondary and primary wound with proper size wire

cap, assures moisture proof connection.

and balanced to give peak efficiency.



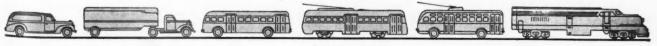
Delco Hydraulic Shock Absorbers are engineered to meet the particular requirements of each type of application. As a result, they provide more efficient, longer-lasting ride control—with improved "roadability" and less tire wear. Delco engineers have long worked with leading manufacturers of commercial cars, trucks, buses and trolleys in solving problems of springing, suspension and weight distribution. This wide background of experience enables Delco to help you solve your problems more quickly and more satisfactorily.

HYDRAULIC SHOCK ABSORBERS

DELCO PRODUCTS DIVISION, GENERAL MOTORS CORPORATION DAYTON, OHIO



Delco original-equipment service parts and products are available nationally through United Motors Service distributors served by 20 United Motors warehouses.



Остовек, 1946

ill

all ete ns nal

the

ver ft., ron tor, nip-

JAL

Use postage-paid card inserted at page 59 for free information on advertised products

179



INTRODUCING

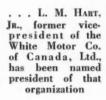
.E. A. RAZEK, recently transferred to the Atlanta, Ga., motor truck branch of the International Harvester Co. as assistant manager.

...B. G. Jones, newly appointed assistant manager of the Louisville, Ky., branch of the International Harvester Co.

...W. L. TYLER, as sales manager for a newly created Pacific Coast Region embracing California and Northwestern districts for the Willard Storage Battery Co.



. ROBERT M. CLAVE, as execu-tive assistant, General Sales Depart-ment, Ward Lament, Ward La-France Truck Divi-Lasion of Great American Indus. tries, Inc., Elmira, N. Y.







... CABL KAHLERT, newly appointed Eastern Division sales manager of Toledo Steel Prod-Toleuc ucts Co., T Ohio Toledo,

. . HAROLD F. GRIFFIN, who is president of the newly organized Griffin Lamp Co., with factory lo-cated in Hamilton, Ohio





. ROBERT L. BARTLEY, recently named sales man-ager of the tank division of Gar Wood Industries Inc., Detroit, Mich.

(TURN TO PAGE 182, PLEASE)



and out of the repair shop-with a Champion Grille-Guard. Ask any truck owner who guards against costly, time-wasting front-end damage this modern way. He'll tell you that Champion Grille-Guards are ruggedly built

Keep your truck on the road-

to protect fenders, radiator grille, headlights and radiator. He'll tell you, too, that driver, truck and load are given added protection in congested traffic.

Why not investigate the advantages of this low-cost protection? Ask your truck dealer to tell you more about Champion Grille-Guards. Or write to The Truckstell Co., Union Commerce Bldg., Cleveland, Ohio.



- Extra strong
- Rustproofed throughout
- Easily installed
- · Protects entire front end

CHAMPION GRILLE-GUARDS

TURNER EQUIPMENT CO. pproved DETROIT, MICHIGAN AND

> TRUCKSTELL SPECIALIZED EQUIPMENT FOR PLUS PERFORMANCE



The **Wagner** CoMaX line is complete ...and it's available NOW!

You gain by ordering your *entire* requirements of brake lining from a single source—do it by standardizing on CoMaX. The CoMaX line provides *complete coverage* for all trucks, tractors, trailers, passenger cars, and buses.

Regardless of what your lining requirements may be—whether drilled sets, rolls, blocks, or slabs—you'll find just what you should have in the Wagner CoMaX line.

CoMaX has these important characteristics:

- 1. Uniform in frictional qualities throughout the entire service thickness. As the lining wears, the same type of brake lining surface is always exposed to the drums.
- 2. Does not compress or swell. No changes in lining thickness take place, other than that caused by normal wear. Brakes remain adjusted over long operating periods.
- 3. Easy on drums. Contains no abrasive material.
- 4. Wears slowly. Its ingredients are carefully selected for extra-life properties.
- 5. Is quiet-grips silently, with no "howling" or "squealing".
- 6. Permits smooth, controllable deceleration. No jerking stops. CoMaX responds to the degree of brake application.
- 7. Doesn't deteriorate with age. Whether in use, or on the shelf, CoMaX resists the elements.

Apply Wagner CoMaX on your next relining job. Let us send you Catalog BU-128 which lists CoMaX in sets, rolls, blocks, and slabs, and gives correct information for most passenger car, truck, tractor, and bus applications. Find out for yourself why Wagner CoMaX is the preferred brake lining for Quick, Safe, Smooth Stops. Wagner Electric Corp., 6470 Plymouth Ave., St. Louis 14, Mo.



Every repairmen needs Catalog BU-128 on Wagner CoMaX Brake Lining, Send for your free copy. LOCKHEED HYDRAULIC BRAKE PARTS AND FLUID...Norol...Comox Brake Lining

Wagner



AIR BRAKES...TACHOGRAPHS...ELECTRIC MO-TORS...TRANSFORMERS...INDUSTRIAL BRAKES

Electric

Wagner's 25 Branches: ATLANTA 3 • BALTIMORE 18 • BOSTON 15 • BUFFALO 8 • CHICAGO 16
CINCINNATI 10 • CLEVELAND 15 • DALLAS 1 • DENVER 3 • DETROIT 2 • INDIANAPOLIS 4 • KANSAS CITY 8
LOS ANGELES 15 • MEMPHIS 3 • MILWAUKEE 2 • MINNEAPOLIS 4 • NEW YORK 23 • OMAHA 2
PHILADELPHIA 40 • PITTSBURGH 13 • PORTLAND 9 • ST. LOUIS 3 • SAN FRANCISCO 3 • SEATTLE 4 • TORONTO 2

emdis-Co.

M.
ecuecuentlivieat
dusira.

LERT,

sion of Prod-

ledo,

ently mantank Gar stries, Mich.

JRNAL

INTRODUCING . . .

(CONTINUED FROM PAGE 180)

...E. D. GRAY, new district sales manager of the Northwestern district for the Willard Storage Battery Co. His headquarters will he in Seattle

...E. W. IMAN and C. A. HALLBERG, who have been appointed assistant sales managers of the Lubricating Equipment Division of the Aro Equipment Corp., Bryan, Ohio.

...BERNARD FIFE, who has resumed his executive position with Standard Motor Products, Inc., Long Island City, N. Y., after four years in the Armed Forces.



. CHESTER J. FREY, as sales representative of the Belden Mfg. Co., Chicago, Ill., for the eastern sales district of the Buf. falo. Syracuse and Pittsburgh areas

K-D 380 VALVE SPRING

COMPRESSOR — fastest

one man tool of its kind,

really puts profit in the

job. Rugged steel construction, two pairs ad-

nearly all L- and valvein-head motors, old and new. Easy to use. Get K-D's 380 from your

K-D 900

SPRING LIFTER-

fender" jobs on

late models. De-

signed for low cover plate openings and low

K-D 875 PISTON RINGER. Saves rings and fingers,

OFFSET"

for hard

hung

jaws. Services

VALVE

"under

manifolds.

justable

Jobber.

. . Don Cum-MINS, who has been appointed quality manager to serve as final authority on decisions affecting the quality of Cum-mins Engines





. . HUNT ELD. RIDGE, who has rejoined the Alem. ite division of Stewart-Warner Corp. and has been appointed head of national accounts department



. . SCOTT M. KEN-NEDY, as zone manager for Maremont Automotive Products, Inc., Chicago, III.





. . . ALFRED E. KAY. worth, newly appointed sales representative cover-ing the New En-gland states for the Belden Mfg. Co., Chicago



. MICHAEL DON-OVAN, recently appointed to the technical service staff of Turco Products, Inc., Los Angeles, Chicago and Houston. He will be located at the Los Angeles office





. HAROLD J. O'NEIL, as assistant to the vice-president and coordinator of national accounts for the General Detroit Corp.

(TURN TO PAGE 184, PLEASE)

TOOLS THAT MAKE SERVICE JOBS PAY



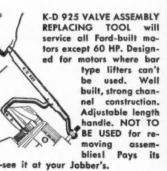




Improved K-D 99 CONVERTIBLE SAW FRAME saws around corners and in narrow openings. New locking device features quick blade changes, assures correct tension. Frame takes 3'', $4\frac{1}{2}''$, 6'', 10'', 12'' blades. One 3'', one 12'' blade furnished. All steel frame, no loose parts. Extremely useful on all kinds of jobs. At your Jobber's.



K-D 245 BAR TYPE VALVE SPRING LIFTER. To be used only for replacing assemblies on Ford V-8 and Mercury motors. Strong, double life tool of drop forged chrome va-nadium steel. 30" long, jaws alike at each end. Takes the headaches out of tough jobs, makes 'em pay. See it at your Job-



stock them.

assures perfect alignment. Removes, installs di-agonal, step- or straight cut rings up to 4" diameter. Handy pocket size, designed for long service. Makes a hard job easy. Jobbers





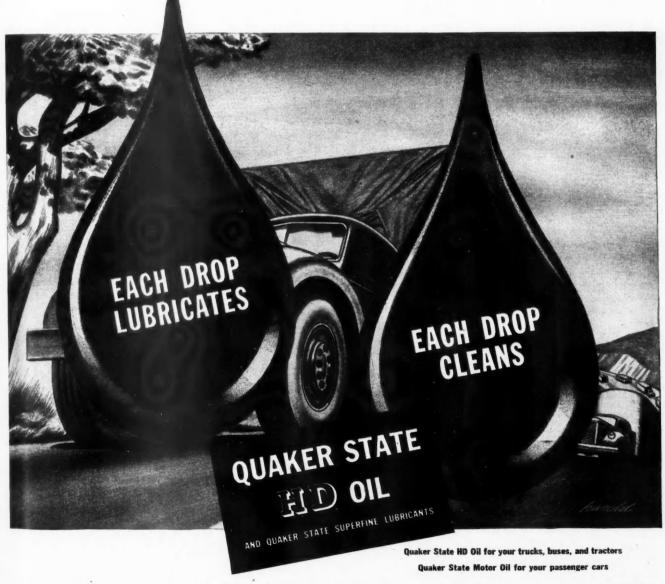
ISF NOUBLE-NUTY NUL!...

The working surfaces of your bus, truck, or tractor engines shouldn't be dirty—shouldn't be coated or clogged with dirt, sludge, gum, or sticky "varnish."

You don't have to take your engines down every so often just to prevent that.

Not today any more! Today Quaker State HD Oil takes care of that for many smart operators. Prevents dirt, sludge, gum, and "varnish" from getting a foothold. Lubricates better, too. And lasts longer. Stands up in hard, heavy service.

All this means savings. Less maintenance expense. More time on the job for your buses, trucks, or tractors. More income. Longer equipment life. Less overhead. Try Quaker State HD Oil in your own fleet. You'll find it pays.



QUAKER STATE OIL REFINING CORPORATION . OIL CITY, PENNSYLVANIA

INTRODUCING . . .

(CONTINUED FROM PAGE 182)

...H. H. Lands, Eastern division manager for the Joyce-Gridland Co., Dayton, Ohio.

...Bernard L. Cahn, recently appointed executive assistant in charge of sales and promotion activities for the Insuline Corp. of America.

...Henry M. Saffren, former captain in the Air Technical Service Command of the AAF, becomes technical director of Solrun Services, Inc., Philadelphia, Pa. ...RANDLE P. SHIELDS, who has succeeded W. G. JAMISON as Pacific Coast regional representative of the National Highway Users Conference. Mr. Jamison resigned due to ill health.



... J. C. LEONARD, as sales manager of the Industrial Marketing Division of Oakite Products, Inc., New York, N. Y.

... FLOYD STEVENS, who has joined the International Salt Co., Inc., as a field engineer to assist in the company's program to maintain highways free of snow and ice





... CLARK E. JACK-SON, who has recently become affiliated with the technical service department of Turco Products, Inc., Los Angeles, Chicago and Houston

... GAIL RUTLEDGE, as midwestern regional sales manager for the General Detroit Corp. He will be located at the company's Chicago branch





DENJAMIN
PUTTERMAN, who
has acquired full
ownership of Yankee Metal Products
Corp., Norwalk.
Conn.

(TURN TO PAGE 186, PLEASE)



The White Motor Co., of Cleveland, Ohio, aware of the greatly accelerated progress of decay in wood in tropical and semi-tropical climates, solved this problem in truck cabs for the Hawaiian Pineapple Co. by constructing the cab framing with pressure-treated wood. The various cab parts, it is reported, were pre-framed and high strength was assured by manufacturing all parts with in. lumber glued together, where necessary for thicker sections, with phenolic resin glue which is decay and mildew proof. Laminated sections made up in that manner also produce higher strength and greater freedom from splitting than individual solid sections



• You'll be Proud to own this New Marquette Hi-Rate Charger . . . it's a Streamlined Beauty, and a real time and money saver. The Marquette Hi-Rate Charger keeps your batteries at peak efficiency . . . and your fleet on the road.

You'll appreciate operating the Hi-Rate too! It has a truly High Speed Testing system . . . featuring accurate 30 second battery test and individual cell check. Automatic Time Switch . . . Just set it and Forget it! New type Circuit Breaker protects both battery and charger. 100 ampere capacity.



OUTSTANDING MARQUETTE HI-RATE FEATURES

• HIGH-SPEED Charging • 30 Second Battery Test
• Tests BEFORE Charge • Shows EXACT Charging Time

• COPPER OXIDE Rectifier for Long Life • Circuit Breaker

LOOK TO MARQUETTE FOR LEADERSHIP
MARQUETTE AUTOMOTIVE EQUIPMENT SOLD EXCLUSIVELY
THRU THE NATION'S LEADING DISTRIBUTORS



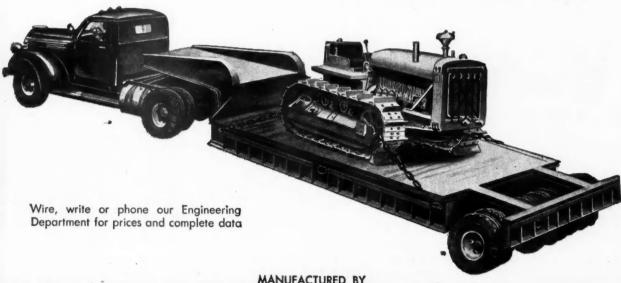
Ост



Solving hundreds of such problems throughout the trucking and trailer industry

Available in varying capacities from 13,000 to 25,000 pounds

For LOW BED TRAILERS For all Types of Heavy Hauling



MANUFACTURED BY

AXLES

BRAKES

FORGINGS

TRAILER PARTS

Остовек, 1946

Use postage-paid card inserted at page 59 for free information on advertised products

185

CCJ NEWSCAST

(CONTINUED FROM PAGE 184)

ATA To Handle Employe Deferment Forms

American Trucking Associations has been authorized by the Office of Defense Transportation to receive and check forms submitted by motor carriers of property seeking deferment of key employes from military service.

Carriers desiring to obtain deferment for employes should submit Selective Service Form 42A Special Revised. The forms are screened and checked for accuracy and completeness by the receiving association, and those found to be complete are forwarded to ODT. All requests for deferment that are certified by ODT go to national headquarters of Selective Service for transmission to the appropriate local board.

Standards for certification of deferment requests are based on "supervisory, technical and scientific personnel whose removal would significantly retard production in industries essential to the reconversion or otherwise essential to the national existence." These standards are interpreted to include trucking industry operation and

maintenance occupational categories as follows: "Owners, managers, superintendents and dispatchers, with at least two years of active incumbency and a substantial amount of preparatory training."

Employers desirous of obtaining ODT certification consideration for registrants qualifying under these standards should mail the following information to ATA, 1424 16th St. N.W., Washington, D. C.

 For each registrant—two completed triplicate sets of Selective Service Forms
 A Special Revised, properly executed and signed.

2. For each registrant—a statement in triplicate presented in detail so that convincing evidence may be placed before ODT and Selective Service.

The statement should include: (a) the effect that the loss of the registrant's services would have on the carrier's operations, (b) the training of the registrant for the duties he now performs, (c) the possibility of his replacement and the carrier's efforts to obtain and train a replacement, (d) an indication that no other employe in the registrant's employment category is laid off, and (e) an indication that the form has been submitted only to the ODT.

Cases of registrants now classified in 1-A will be reopened at the discretion of their Local Boards upon receipt of certified Forms 42-A Special Revised. For registrants facing imminent induction, employers should advise the Local Board if this form has been forwarded for certification.

Central Mike Says: LARGEST SELLING MICROMETERS IN THE AUTOMOTIVE FIELD THROUGHOUT THE WORLD!





CENTRAL

FOR MORE THAN A

GOODRICH PRESIDENT URGES FREE MARKET FOR RUBBER

Recommendations that "serious consideration be given" to returning crude rubber to a free-market basis at the end of this year, and that the government sell or lease to private industry its facilities for producing American-made synthetic rubber as soon as the world shortage in rubber supply is eased, has been made by John L. Collyer, president of The B. F. Goodrich Co.

(TURN TO PAGE 188, PLEASE)



The new sales and service plant of Carter, Inc., at Nashville, Tenn. This plant is one of three recently opened by the company. The other two are in Birmingham, Ala., and Memphis, Tenn. W. M. Starks, formerly connected with the Retail Sales Dept., will serve as manager of the new Nashville plant. Officers of the new company are N. A. Carter, Jr., president; W. D. Evans, vice-president; F. L. Bower, sales manager; P. A. Gowin, secretary, and C. E. Woods, treasurer

THE CENTRAL TOOL CO.,

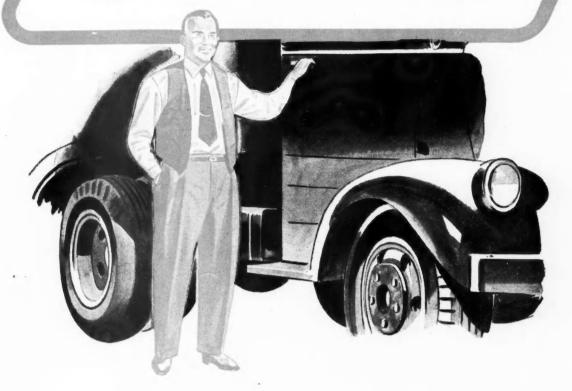
WRITE FOR CATALOGNO. 17
The entire line of individual

micrometers and sets fully

AUBURN. RHODE ISLAND

illustrated.

"I want to be sure Magnesium will stand the gaff"



Right you are, Mr. Fleet Operator, in wanting assurance that the magnesium going into your rolling stock can take the punishment you'll give it. We point to both air and ground performance as evidence—

You saw magnesium "take bumps a'plenty" during the war. Planes used American Magnesium products in dozens of places where dependability was paramount; landing wheels, engine and

air frame parts. And there are prewar buses and trucks still riding the highways giving this same kind of evidence.

You can secure specific data on the dependability of weight-saving magnesium by calling the nearby Alcoa office. Or write Aluminum Company of America, Sales Agents for American Magnesium products, 1719 Gulf Building, Pittsburgh 19, Pennsylvania.



AMERICAN MAGNESIUM CORPORATION
SUBSIDIARY OF
ALUMINUM COMPANY OF AMERICA

n of r-

de nd ell ies

tic

in

by F.

his by Bir-

enn. vith nancers rter, resi-

NAL

CCJ NEWSCAST

(CONTINUED FROM PAGE 186)

As things stand now, according to Mr. Collyer, general-purpose rubber could be manufactured and sold by private industry at a 600,000-tons-a-year rate for between 15 and 17 cents a pound—including plant amortization, selling expense and return on invested capital. The current U. S. A. delivered cost of Far East crude is between 25 and 26 cents a pound.

"For the present, of course," says Mr. Collyer, "world-wide demand for rubber is

such that it is impossible to get a true picture of how preference for crude rubber will stand up with the indicated differential of eight or more cents a pound. However, some time in 1947, the available supplies will be such as to allow manufacturers a free choice of one or the other—or both—in varying combinations, on the sound basis of price relation to finished-product performance."

In urging that the Government proceed with the program, recommended by the Inter-Agency Committee on Rubber, of selling or leasing to industry the Americanmade rubber producing facilities, the B. F. Goodrich president again reiterated the warning he first made in June of 1943, that in all postwar decisions on rubber policy the matter of military security be the foremost consideration. His proposals have been maintenance, "in plants kept in condition and ready to run," of 600,000 tons standby capacity, and minimum actual production and use of 200,000 tons a year from those plants.

Discussing technical progress, Mr. Collyer said that "as of now, and taking the realm of large-tonnage uses as a whole, crude rubber still has the advantage in performance." He added, however, that great progress has been made since the early months of this country's experience in using American-made rubber, in (a) the rubber itself, notably in making improved variations of the main-type rubber formula; (b) compounding; (c) product construction, through greater use of rayon and other man-made filaments, and (d) in designing products, such as the passengercar tire his company is now making that actually outwears prewar natural rubber tires.

ATA BOOKLET TRACES TRENDS IN TRUCK TRANSPORTATION

An interesting and useful booklet showing in easy-to-read illustrated form the important trends in truck transportation in recent years has been released by the Department of Research, American Trucking Associations, Inc.

The booklet, entitled "Trends," contains 37 pages of information on such factors as average load, length of haul, wage per employee, investment, revenue, mileage, number of power units and trailers, and many other significant factors.

(TURN TO PAGE 190, PLEASE)



Gar Wood Industries, Inc., has developed a new catch basin cleaner for installation on a 160-in. wheelbase truck chassis. The unit takes up so little room behind the cab that it can be used in conjunction with a full-size dump body, thus making it possible for one truck to do the complete job: cleaning out the manholes and disposing of the mud. The unit consists of a jib-boom crane, winch and Hayward 18-in. orange peel bucket. The crane will lift up to 1500 lb at any radius and is adjustable to radii of from 4 ft 3 in. to 9 ft, and has a swing angle of 350 deg. The winch is a Gar Wood double drum winch with a line pull of 1500 lb.



Constant laboratory research backed up by 30 years experience in the manufacture of brake lining in both automotive and industrial fields keeps Grizzly constantly alert to developments resulting in finer brake lining. This same research and experience enables Grizzly to solve brake lining problems of widely divergent natures

-helps keep Grizzly in its enviable position of one of the largest, most dependable producers of molded brake lining.

When you are confronted with a brake lining problem, follow the example set by other fleet operators and service managers—go to your nearest Grizzly Distributor or write Grizzly Manufacturing Company, Paulding, Ohio.



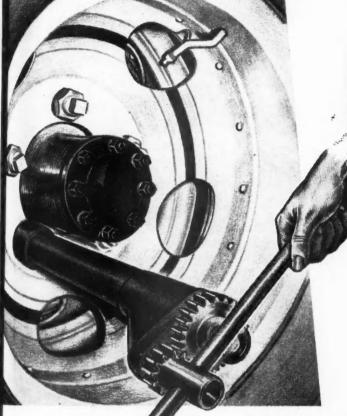
"Bear in Mind". . . ask for

GRIZZLY

BRAKE LINING

UTS TIGHTENED OR LOOSENED Like Magic ON BUDD DUAL WHEELS

WITH THE Sweeney



17,000 OF THESE **REVOLUTIONARY WRENCHES** NOW IN USE ON TRUCKS AND BUSES!

WARTIME RESEARCH developed the Powerench, and now its benefits can be yours! The Powerench, a big, rugged tool, as simple as it is effective, is a gear-propelled wrench with an outer wrench (with hex end), an inner wrench (with square end), and a two-piece handle. Weighing only 16 pounds, it enables one man in your shop, or on your truck, to do the work of two or more.

POWERENCH WILL SAVE YOU MONEY!



SAVES TIME IN THE SHOP-- One net, with a Powerench, can change heels, which with old-fashioned lev-r-type wrenches have frequently re-uired two or three men. Frozen nuts, osily removed with the Powerench.



EASY TO OPERATE—Your truck driver, with a Powerench in his toolbox, will be able to quickly change tires on the road, by himself without help, be able to quickly of the road, by himself eliminating costly, t service calls.



ASSURES PROPERLY TIGHTENED NUTS—Enables your service man or driver to tighten nuts properly (not too tight, not too loose), (1) prevents too tight, not too loose), (1) prevents broken studs, (2) prevents egg-shaped holes, and (3) avoids undue tire wear.



REMOVES NUTS WHEN STUD IS BROKEN—The Powerench gives you assurance of no more wheels ruined by cutting torches. No more costly de-lay when this aggravating problem of broken studs arises.

SEND A COUPON TODAY for a free demonstration in your own shop. There's a distributor in your locality.



IN THE SHOP

YOU NEED POWERENCHES

POWERENCH does double duty. It assures correctly tightened wheel nuts and thus avoids costly delays. When a wheel change is necessary, it quickly and easily removes even the tightest nut.



This means you can't afford to be without a POWERENCH in your shop and on every truck you operate. One POWERENCH, on the job at the proper moment, may save you hours of costly delay and pay for itself overnight!

TO FLEETS, GARAGES AND SERVICE STATIONS B. K. SWEENEY Manufacturing Co. 1601 23rd Street Denver, Colorado

Powerench Division, Dept. C

I would like a free demonstration of your Pow erench. Please advise the name and address of your nearest distributor.

(Name)

(Company)

(Type operation—No. trucks) (City)

(Street, Zor

POWERENCH DIV., B. K. SWEENEY MANUFACTURING CO.

CCJ NEWSCAST

(CONTINUED FROM PAGE 188)

The publication contains authentic data taken from the official annual reports of Class I truck lines to the Interstate Commerce Commission. There are approximately 2000 such carriers, each of which has gross revenues of at least \$100,000 a year. Regional breakdowns of the data make it possible to see at a glance the great differences in the truck operating characteristics of different parts of the country.

According to "Trends," the average wage

of employees in the trucking industry was \$2,395 for the year 1944, as compared with an average for all private industry of \$2189. In the same year, 45 to 50 per cent of all motor carrier revenue was paid out in wages.

Other highlight facts gleaned from "Trends," which is the fourth in a series of similar booklets about truck transportation, are as follows:

The average intercity truck Operates 193 miles per trip. Pays \$1403 in taxes a year. Runs 43,925 miles per year. Gets 4.8 miles per gal. of gasoline. Gets 82.9 miles per quart of oil. Earns gross revenue of 32.2 cents per vehicle mile and 3.8 cents

per ton-mile. Takes in gross revenue of \$15,099 a year. Carries 2230 tons of freight a year. Hauls 393,261 ton-miles of freight a year. Carries 8.39 tons per load,

The Class I carriers average 3.21 employes for every power unit in operation. The average revenue per carrier is \$515,682 per year.

On a national basis, Class I carriers lease 21.2 per cent of the equipment they operate, but there are wide differences in different parts of the country ranging from a low of 2.9 per cent in New England to a high of 35 per cent in the Central Region (Illinois, Indiana, Ohio and the Lower Peninsula of Michigan).

Intercity carriers use more tractor-trailer combination units than they do ordinary straight trucks, the ratio being 143 tractors for every 100 straight units. Local carriers, on the other hand, operate only 41 tractors for every 100 straight trucks.

For every 100 tractors operated by the intercity carriers there are 123 trailers or semi-trailers, while local operators have 175 trailers or semi-trailers for every 100 tractors.

KOPPERS BUYS ADDITIONAL PLANT FACILITIES

The Defense Plant Corp. property and equipment adjacent to its American Hammered Piston Ring plant at Baltimore has been purchased by Koppers Co., Inc., and will be used for production of automotive piston rings.

Allen W. Morton, Vice President of Koppers and General Manager of the Piston Ring Division, disclosed that the additional plant facilities were purchased for \$1,500,000 from the War Assets Administration and will give the company about three times its pre-war capacity of industrial and automotive piston rings.

(TURN TO PAGE 212, PLEASE)



Officials of two major transportation companies serving the Pacific Northwest met in Portland, Ore., at the inauguration of Consolidated Freightways' air freight pick-up and delivery service for United Air Lines. Left to right: W. S. Myron, Portland, assistant general sales manager, Consolidated Freightways; Paul C. Ochsner, Portland, chief of cargo sales for United Air Lines; M. P. Bickley, Chicago, manager of air cargo sales, United Air Lines; Ray Doherty, Portland, general sales manager, Consolidated Freightways, and Ray Smart, Portland, manager of Consolidated's warehouse and moving van departments



Kold-Hold plates take up little space, leaving room for a larger payload. Regardless of the type of installation for meat, milk, frozen foods, ice cream, they protect and insure the freshness of the load through the longest trip by holding specified temperatures until the day's end.

Kold-Hold's over a decade of experience in designing, engineering and building refrigeration products to meet specific needs, is your guarantee for complete satisfaction on any truck installation.

Providing a cooler room on wheels, not only saves on spoilage, but also on man hours, as nothing needs to be removed from the trucks at night. With a simple extension from your existing cooling system to the Hold-Over Plates in the truck, you have a cooler room on wheels.

At the same time, Kold-Hold truck refrigeration costs less than ice, and Kold-Hold plates will outlast your truck body — and old plates can easily be adapted to meet the needs of your new equipment.

Write today for full information and a complete catalog.



KOLD-HOLD MANUFACTURING CO. 620 E. Hazel St. Lansing 4, Michigan Attend REMA (Refrigeration Equipment Manufacturers Association Convention will be held in Cleveland Public Auditorium October 28 to October 31). See Kold-Hold equipment at this show in space 414.

Greatest Truck Seat Ever Built

Tubular frame — welded steel. Oil tempered springs. One glance at the new Bostrom Level Ride seat tells you it's the stand-out among truck seats for comfort, safety, and economy. See how the hy-draulic shock absorber takes the jolts to prevent strain on the driver. See how the suspension mechanism really levels out the ride to reduce fatigue. See its rugged construction and sturdy materials to cut seat repair bills to the bone. See how compact it is - for easy installation. This seat is the result of over eight years of engineering by Bostrom - the firm that holds the nation's leading position in heavy duty transport seating. Its superiority has been proved on so many truck fleets that it is guaranteed to meet your requirements. Order today through your dealer or direct.

No. 10 Bostrom Level Ride Seat ___\$64.75 ea. No. 10 Bostrom Level Ride in lots of

six or more _____\$59.50 ea. No. 15 Bostrom Companion Seat (without hydraulic suspension) ____\$28.50 ea. Prices F.O.B. Factory-plus Federal Excise Tax. BOSTROM MANUFACTURING CO. MILWAUKEE 2, WISCONSIN

Springs adjustable for varying weights of drivers. absorber. Automoile type rubber

High quality cushion materials made to outlast ordinary cushions six to one.

FLEET COSTS WENT UP-

Seven-Year Records Show Delvac Oils Give Substantially Longer Mileage Between Major Overhauls than National Average

SEVEN YEARS AGO fleet operators were first offered a new kind of truckbus engine oil—DELVAC! The distinguishing feature of this oil was a chemical additive which acts as a powerful detergent, helping to keep engines clean.

Before DELVAC OIL was offered for general service, it had been put through years of the most exhaustive laboratory and fleet testing. The results led us to believe DELVAC would set entirely new

standards of engine oil performance.

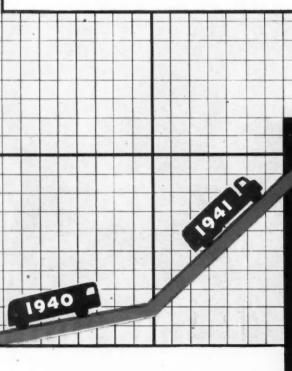
After seven years in fleet service, DELVAC has lived up to and surpassed our expectations.

Case histories show that DELVAC enables many engines to average better than 100,000 miles between major overhauls. That is substantially better than the industry average.

What better proof of the quality of this oil can be cited than the widespread swing to DELVAC shown by the accompanying graph of sales the first seven years?

SOCONY-VACUUM OIL CO., INC and Affiliates: Magnolia Petroleum Co., General Petroleum Corporation





Heavy Duty
DELVAC
OILS
Help Keep Engines Clean!

946

DOWN

1945

1944

GRAPH REPRESENTS
RISING FLEET USE
OF DELVAC OILS
FIRST SEVEN YEARS



FLEET
OPERATORS'
SERVICE

NEW PRODUCTS

(CONTINUED FROM PAGE 61)

chassis. A convenient clean-out cap permits direct removal of sand from the hopper.

The sander provides traction at the truck driver's finger tips, insuring safety regardless of slippery road conditions.

Safety Grit, said to be neither a sand nor a substitute but a scientifically processed road gripping, anti-slipping material that will not pack down or absorb moisture under normal operating conditions, is packed by Highway Safety Appliances, Inc., in convenient 50-lb. water-proof bags.

Use Free Postcard For More Details.

P34. Generator, Magneto Tester

The Weidenhoff Model D-389 Combination Generator and Magneto Test Bench developed by Joseph Weidenhoff, Inc., Chicago, Ill., enables the service station operator to service both generators and magnetos. Being easy to use it can be mastered quickly by mechanics.

This unit tests every car and truck generator flanged mounted or belt-driven up to the capacity of the engine. Tests gen-

erators without overloading by using field rheostat control on panel. Drives generators for sanding commutators and seating brushes. Test flange or base mounted magnetos—all types, except vertical, on tractors and stationary engines.

Makes running tests of magnetos in rotary spark gap. Test generators and regulators. Checks lag angle as well as throw-out speed of impluse couplings.

Reduction gears (10-1) allow speeds as low as 50 m.p.h. useful for checking throwout speed of impulse couplings. Furnishes accurate means to check "coming-in" speeds of magnetos. Tests vertical type magnetos, using Model D-347 vertical drive (which is optional).

Use Free Postcard For More Details.

P35. Hot Tank Cleaner

A new, low-cost, non-inflammable hot tank cleaner that removes carbon and paint—as well as grime, grease, gums, heat-hardened resins and heavy dirt—from steel and other ferrous metals without the necessity of scraping and other manual methods, has recently been introduced by Turco Products, Inc., Los Angeles, Cal.

Marketed under the name of Ferrex, it is claimed that the carbon and paint stripping qualities of this new product result from a combination of two cleaning agents, Ferrex B, an alkaline solid, and Ferrex C, a direct action liquid solvent.

The manufacturer points out that Ferrex not only requires no expensive equipment—an ordinary steel hot tank being sufficient, with an air agitation installation optional—but that further economies are effected because of its high "buffer index" that permits the solution to be used over and over again with little depletion of strength. Furthermore, since Ferrex contains no inert ingredients, wastage is eliminated through the use of every particle of the cleaner.

Use Free Postcard For More Details.

P36. Asphalt Protective Solution

Asphalt pavement surfaces such as driveways, shop floors, walks, etc., can now be sealed to prevent damage from gasoline, oil, freezing and thawing, with a solution developed by Maintenance, Inc., of Wooster, Ohio. The protective coating known as Jennite J16 bonds to any clean surface and will give unusual resistance to adverse elements, according to the manufacturer.

Jennite is applied to the surface with (TURN TO PAGE 198, PLEASE)



USES DODGE-FABCO SIX/TENS

for City Hauling

Pacific Intermountain Express, one of the largest transcontinental freight haulers operating between San Francisco, Los Angeles, St. Louis, Wichita and Chicago, use a fleet of Dodge-Fabco 6/10 units with van bodies for city pick-up and delivery at their California terminals. This combination gives P. I. E. maximum load-carrying capacity coupled with the low operating cost of a medium duty truck. If you are interested in obtaining the maximum service from light and medium duty trucks, write for copies of Fabco 6/10, and Fabco Dual Drive Bulletins.



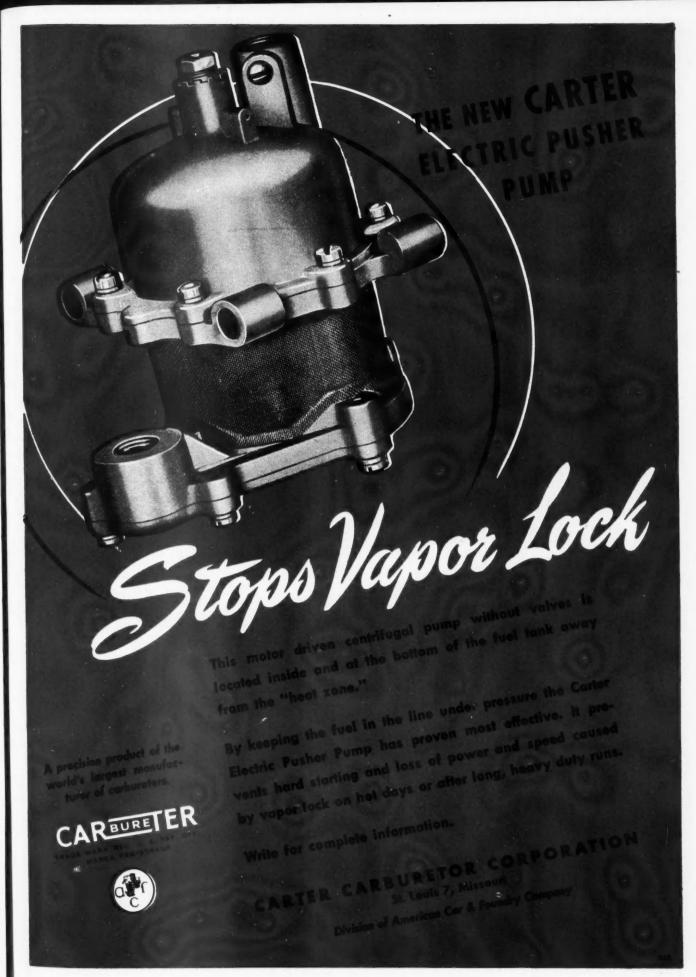
26 Years in this Business

F. A. B. MANUFACTURING CO.

1249 SIXTY-SEVENTH STREET DAKLAND 8, CALIFORNIA Dual Drives 6 and 10 Wheel Units Logging and Highway Trailers Frame Extensions

Use postage-paid card inserted at page 59 for free information on advertised products

COMMERCIAL CAR JOURNAL



NEW

CP PNEUMATIC AUTO IMPACT WRENCH.



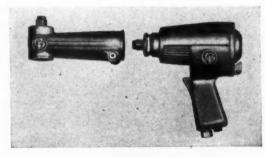
These models of the famous CP Pneumatic Impact Wrench have been developed expressly for the automotive field

Here's a power wrench — operating from a small air compressor — that saves hours, dollars and labor in installing and removing nuts and machine screws. No effort is required because no torque is transmitted to the operator. Marvelous for such jobs as —

- applying and removing wheel, cylinder head, bumper and oil pan bolts, nuts and cap screws
- removing and replacing knee action and spring shackle bolts, nuts and bushings
- driving engine block studs, screw type cylinder sleeve, gear, bearing, wheel and bushing pullers.

Made in two models: CP-730 (43/4 lbs.) for light automotive repair (to 7/16" bolt size);

CP-750 (9½ lbs.) for heavier work (to 5%" bolt size). Power of either wrench may be adjusted with convenient regulator.
Write for Bulletin 813.



Angle heads simplify nut running in difficult locations

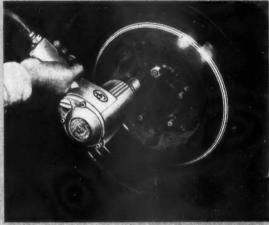


CHICAGO PNEUMATIC

General Offices: 8 East 44th Street, New York 17, N. Y.

PNEUMATIC TOOLS • AIR COMPRESSORS • ELECTRIC TOOLS • DIESEL ENGINES
ROCK DRILLS • HYDRAULIC TOOLS • VACUUM PUMPS • AVIATION ACCESSORIES

saves hours and dollars!



Wheel nuts are applied or removed, without effort, in one-fifth the usual time



Impact Wrench speeds cylinder head nut running



Wrench with angle head on difficult bumper application



CP Wrench driving screw type sleeve puller

NEW PRODUCTS

(CONTINUED FROM PAGE 194)

a brush or squeegee, or it may be sprayed. No heating is required, and coating is said to be as easy and no more expensive than a paint job.

This solution has been used by the Army and Navy to protect asphalt pavements against deterioration from gasoline and oil as well as from the elements. It is said to be particularly useful over parking areas, where accumulations of grease and oil quickly eat into the asphalt.

Use Free Postcard For More Details.

P37. Tire Vulcanizer

A new machine for repairing tires, tubes, or other rubber products is announced by the Allied Automotive Corp. of Detroit. Known as "Tireweld," and equipped with an automatic time switch, the machine makes a weld of live rubber (not a patch) that stretches with the tire or tube.

The operator sets the tire or tube on the element plates and tightens them. The "Marktime" switch clock is then set to the amount of time required for heating. The electric current is turned off automatically when the time is up. The operator is left free to attend to other work while the weld is being made, without



danger of burning the material by overheating. The complete operation requires only 9½ min.

"Tireweld" is a low voltage unit, operating on 110 volts a.c., 25 or 60 cycle, or direct current. A cast aluminum frame with free swinging arm allows easy access to the work. The heating unit consists of a Chromalox element embedded in a special type metal plate which is said to insure even distribution of the heat.

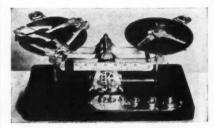
"Tireweld" repairs blowouts and cuts in tubes and tires, whether on the side wall, inside casing, tread, or around the valve. It is said to be equally sufficient on synthetic or natural rubber.

Use Free Postcard For More Details.

P38. Rapid Reverse Winch

Gar Wood Industries, Inc., Detroit, is now offering a new series of single lever truck and tractor Rapid Reverse winches, originally developed for the armed forces for use in conjunction with the company's Ordnance, Air Force and Navy wrecking cranes. There are currently three sizes in production: 15,000, 30,000 and 60,000-lb. pull.

(TURN TO PAGE 200, PLEASE)



Yale's new featherweight automobile keys, made of a special aluminum alloy, are more than 60 per cent lighter and 30 per cent stronger than the conventional heavier nickel-plated brass keys. Three sets of the new Yale aluminum keys, complete with rings and identification tags, have the same weight—as shown above on the sensitive chemist's scale—as one set of the old type key. The new aluminum alloy keys are now in large-scale production at the Stamford Division of the Yale & Towne Mfg. Co.

9t's "TOP REMOVABLE"!



When you wish to remove the new Type MS Internal Safety Valve from a tank compartment for servicing, it is not necessary to dismantle any piping underneath the tank. Valves which have to be removed through the tank bottom present many problems which we have overcome by designing a valve which may be removed through the dome cover, using a standard socket wrench. Write for a copy of our new catalog No. HVS-4 and learn of other new features of this safety valve.



The valve shown above may be operated by hydraulic pressure, or by air pressure from the truck air brake tank.



SHAND & JURS CO.

BERKELEY, CALIFORNIA

CHICAGO

HOUSTON

LOS ANGELES

SEATTLE

SHAND & JURS

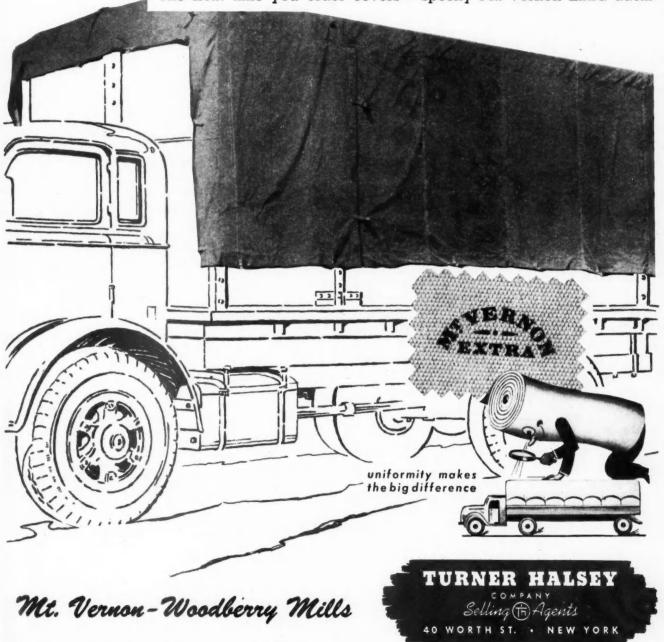
NEW YORK

Ост

Pays Out in Longer Wear

With greater resistance to rough handling and a weather-fighting stamina that assures safe cargo protection, covers made with Mt. Vernon Extra duck are serving the country's largest fleet owners.

Made from choice grades of cotton, spun and woven to a high degree of uniformity, Mt. Vernon Extra duck provides extra quality in covers that pay out in longer wear with better cargo protection. The next time you order covers—specify Mt. Vernon Extra duck.



Branch Offices: CHICAGO . NEW ORLEANS . ATLANTA . BALTIMORE . BOSTON . LOS ANGELES . SAN FRANCISCO

NEW PRODUCTS

(CONTINUED FROM PAGE 198)

Instantaneous change in direction is achieved in this Rapid Reverse series at full load and under full speed by a single straight-line shift without engaging or disengaging the engine clutch. Use of the engine clutch is necessary only at the beginning and end of the job to engage and disengage the power take-off.

The reversing mechanism consists of a double-ended modified jaw clutch sliding on splines or an input shaft which meshes with clutch gears on either end of the shaft. One of these clutch gears meshes directly with the worm shaft and the other meshes through a reverse idler. Thus, complete control of forward, reverse and neutral is achieved by a single straightline shift.

The Rapid Reverse winches lend themselves readily to remote control: the operating levers can be placed anywhere on the truck and can be operated by hand power, vacuum or air.

Use Free Postcard For More Details.

P39. Improved Cargo Hooks

A new type cargo hook for tying down tarpaulins on truck beds has been placed on the market by Rop-Loc Products Co., Cleveland, Ohio. Known as Rop-Loc, the all-steel hook secures the rope in such a way that tying is unnecessary.

The rope is simply wrapped in the patented hook so that it is held securely. Removal is simply-one quick pull and it is loose. The new product is said to shorten delays for adjustment of the truck tarp and to eliminate tearing of the canvas.

Use Free Postcard For More Details,

P40. Infra-Red Heating Unit

A new type heating unit for drying painted surfaces has been developed by The Miskella Infra-Red Co., Cleveland, Ohio. Heatolier, as the unit is called, is

a combination circular fixture embodying the basic principles of the company's Super-Heat units, ordinary incandescent light bulbs and the circular fluorescent

The white enameled body is flared out



to serve as a reflector for the Cirline fluorescent lamp to come. A separate switch is provided for this lamp. Two models are available-the Models A and B. Model A, illustrated, has the infra-red heat angularly directed in opposite directions. The two-lamp circuit produces a total of 500 watts. This floor-type unit eliminates the use of cumbersome arms and fittings. The lamp can be quickly set in any desired position for baking a spot on a fender or for similar jobs. Use Free Postcard For More Details. (TURN TO PAGE 202, PLEASE)



Shown here is the new 1947 Crosley introduced to New Yorkers by Macy's on Aug. 26, 1946, first automobile to enter the low-cost field in the postwar period. The four passenger steel body sedan is powered by a four-cylinder, water-cooled, copper-brazed, sheet steel, high speed engine developing 26½ hp., and has a top speed of 65 miles an hour. It operates at 36 to 60 miles per gallon of ordinary gasoline. The Crosley measures 1:5 in. from bumper to bumper, with an 8"-in. wheelbase and 40-in. tread. Overall beight is 57 in., overall width 49 in.

CURTIS PNEUMATIC MACHINERY DIVISION of Curtis Manufacturing Company

1970 Kienlen Avenue

YOUR GUARANTEE OF DEPENDABLE PERFORMANCE TODAY!

CURTIS PNEUMATIC MACHINERY DIVISION of Curtis Mfg. Co.

1970 Kienlen Avenue, St. Louis 20, Missouri Please send me your Literature Kit C-6, which includes bulletins on Curtis Air Compressors, Curtis Auto Lifts and Curtis Car Washers.

Firm. Street. City.....



Use postage-paid card inserted at page 59 for free information on advertised products

St. Louis 20, Missouri

COMMERCIAL CAR JOURNAL

Hv-I "0 lens. for le "R

is sit

work ber a

tubb

-on corne ners over

Осто



Sure," he agreed, "that 522-UX Hy-• Power is a fine clearance and marker lamp, but figuring 8 lamps per truck with 80 trucks means 640 lamps and—"

"Hold it," I interrupted, "you only need 320 lamps!"

"How do you figure 4 lamps will do the work of 8?" he asked.

"The special lens construction and rubber adapters make it easy!" I grinned.



You see," I continued, "the filament • in this 522-UX Hy-Power is raised above the level of the lamp shell and is situated directly under the apex of the Hy-Power lens. This assures a complete 180° arc of equally radiated light."
"Oh," he said, "I can see that in this lens. These concentric rings bullet the light replaced distance lighting while the light.

for long distance lighting, while these radial flutes direct plenty of light to the side!"

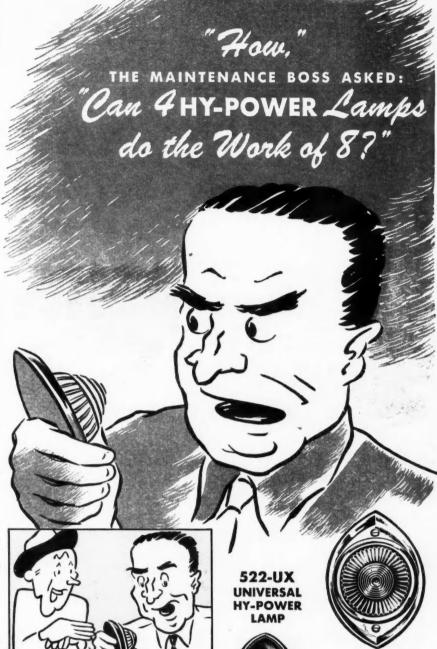
"Right," I replied, "you thus eliminate one lamp at each corner of the trailer."



"Fine," he exclaimed, "but how can you mount these lamps on rounded trailer corners?"

"Easy," I shot back, "you simply use these rubber adapters. They come in four types
—one for large curves of body, one for
corners with 7" to 10" radius, one for corners with 2½" to 6" radius and another for over cab or cab corner mounting.

"Say," he said, "those features are great!"



"They sure are," I echoed, "but they're not all! By using this 522-UX Hy-Power or even the 522-S Hy-Power, have a lamp that combines installation for tops, corners or sides of trucks, trailers, buses and even the tractor cab. Thus, except for head lamps, you only need carry this one lamp for your entire lighting!" "Whoa," he laughed, "I've heard enough!

These Hy-Powers are the lamps for me!



PURE GUM MOLDED RUBBER ADAPTERS

Made from highest grade non-blooming soft black rubber. Fits closely to the curved body surface, nonporous-assuring waterproof installation. Fur, nished in four different types to meet every lamp mounting condition.



FAMOUS KINGBEE PRODUCTS

PROTECTO Rubber Rim Truck Mirrors - HY-POWER Truck Lamps

FOTO-RAY Indestructible

Manufactured by AMERICAN AUTOMATIC DEVICES CO. 502 S. Throop Street, Chicago 7, Illinois

NEW PRODUCTS

(CONTINUED FROM PAGE 200)

P41. Protective Covering

A new protective material for surface coating equipment has been made available to the fleet field by Maintenance, Inc., Wooster, Ohio. Radon, as the solution is known, is said to give long lasting economical protection to truck and auto fenders, tools, concrete structures and other similar units.

The coating provides a surface impervious to water, acid, rust, gasoline, heat,

cold or sunlight, according to its manufacturer. It is applied just as it comes from the container and is easily brushed on. It bonds to any clean surface and after application is flexible, will not peel, check, melt or become brittle. The company states that a surface coated with this solution will not contaminate water, feed, etc., and will not mildew.

For ordinary application, it should be spread over the surface about the thickness of a dime. Coverage will average between 50 and 100 sq. ft. per gal. of the solution.

Use Free Postcard For More Details.

P42. Armature Growler

The Weidenhoff single wound Model B-336 Armature Growler, developed by Joseph Weidenhoff, Inc., Chicago, is said to be especially well adapted for checking the armatures of generators.



The meter instantly shows up a defective winding, nature of defect and its exact location in the armature, shorts, ground, opens, etc. Generator field coils, if desired, can also be tested, their conditions being indicated on the meter.

The Model B-336 has a selector switch with a "high" and "low" position. "High" positions are usually used for testing starting motor armatures; "low" position for generator armatures. The hand piece, with adjustable test points is used on commutator bars, with the line switch in the "on" position. However, the 110-volt test prods are always available for use, regardless of the line switch position, so long as the unit is plugged into a source of A.C. current, Hand piece is used with meter; test prods, with light in base of growler.

Use Free Postcard For More Details.

P43. Ignition Tester

"Ignition Fritz," a new electrical product developed by Littelfuse, Inc., Chicago, now makes it possible to locate automobile ignition troubles easily and quickly. The new tester has neon tubes which light up if spark plugs are performing efficiently.

bu

you'

Own

McC

Chr

and

Why

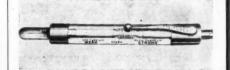
forn

hap

NOT

REF

With weak spark, first neon tube glows. With strong spark, both neon tubes glow. It tests for cracked ignition cables, radio interference caused by cracked distributor heads, cracked spark plugs or broken insulation, etc. No flash in either tube indicates a fouled or shorted plug or broken electrical connection.



The cap on "Ignition Fritz" is a builtin tire valve adjuster and the tip is an accurate gap gage for testing spark plugs. The transparent plastic body is strong and durable and shows clearly the neon lights and printed instructions for testing.

Use Free Postcard For More Details.
(TURN TO PAGE 206, PLEASE)



• EBERHARD RECESSO Compartment Door Locks are easily installed on wood or metal doors. A concealed spring holds handle in folded position and prevents rattle.

BODY BY HEIL, WISC.

the scheme of the smooth, flowing design of

this big tanker.

There is a Recesso Lock to meet your every requirement or preference.

The new Catalog No. 13-A is now on the press. It covers Eberhard's Complete Line of Hardware for Trucks, Trailers, Busses, Taxicabs, etc. Write TODAY or request our "man in your neighborhood" to discuss your specific problem with you.



Division of the Eastern Malleable Iron Co.

2734 TENNYSON ROAD

CLEVELAND, OHIO



Decoys are all right for ducks...

but... decoys won't pay off in customer good will when you're installing parts in a car or truck.

Owners want a first-class mechanical job—they want "the McCoy"—parts that fit! "The McCoy" for vehicles built by Chrysler Corporation Divisions is *MoPar* Factory Engineered and Inspected Parts.

Why? Because they're built to the specifications which Chrysler Corporation engineers know are necessary to deliver top performance. And that kind of performance keeps your customers happy—keeps them coming back to you when they need service.

NOTE TO ALL. REPAIR SHOPS If you need parts of any kind for a Plymouth, Dodge, De Soto, or Chrysler passenger car, or Dodge *Job-Rated* Truck, obtain them from a dealer for these vehicles.



Plymouth

DODGE

DeSata

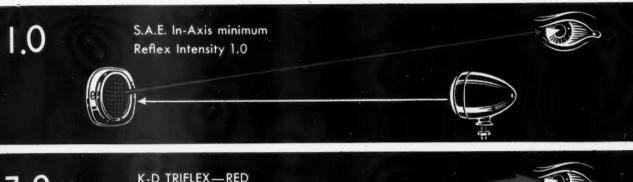
CHRYSLER

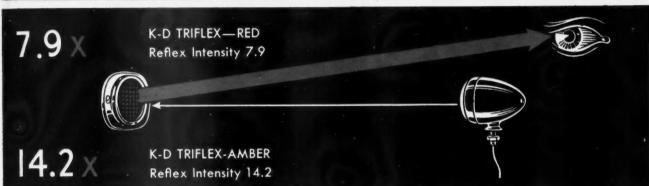
DODGE Sob-Rated TRUCKS

CHRYSLER CORPORATION—PARTS DIVISION
DETROIT 31, MICHIGAN



MIRACLE OF LIGHT REFLECTION K-D TRIFLEX STIMSONITE PLASTIC REFLEX REFLECTORS





These are precision optical instruments reflecting back the headlight beam to the driver for extremely long and wide range visibility. • Tough 18 gauge metal housings. Plastic Stimsonite Lenses inset to avoid damage, practically indestructible. Standard in amber or red. Specify color when ordering. Approved in all states where approvals are issued.



MODEL No. A 333 Oval Flange Mounting



THE K-D LAMP DIVISION

OF NOMA ELECTRIC CORPORATION

The Best In Automotive Safety Products

NOMA BUILDING . 55 WEST 13th STREET . NEW YORK 11, N. Y.

Factory: Cincinnati, Ohio

NEW PRODUCTS

(CONTINUED FROM PAGE 202)

P44. Safety Door Signal

A new device has been developed by the P. M. Co., Newark, N. J., to aid in the prevention of truck-door collisions in garages, warehouses and fleet terminals.

The Dor-Signal Blinker Safety Control gives a "live stop-light signal" to the driver whenever doors are in motion and there is insufficient clearance. These lights, connected to the door switch circuit operate automatically and are easily installed.

Use Free Postcard For More Details.

P45. Shampoo Cleaning Unit

Turco Products, Inc., Los Angeles, Cal., has introduced a new scientific method of cleaning trucks and automobiles through an air-driven, spray application of its original Truco Car Shampoo.

With the new method it is claimed that present personnel can wash 200 per cent more trucks. A pre-rinse to cool the surface, application of the shampoo and a final rinse are all controlled from one nozzle of the unit.

The deluxe model consists of a sturdy, heavy-gage steel, 25-gal. capacity cabinet, three 30-ft. lengths of connecting hose and the fingertip control nozzle. Installation is



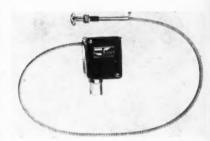
made simply by connecting the cabinet with air and water supply lines. The Car Shampoo is automatically mixed in the cabinet and flows through the connecting hose to the nozzle.

An overhead hose conveyor is available and is recommended for hose protection and greater freedom for the operator in industrial use.

Use Free Postcard For More Details.

P46. Remote Control Switch

A new unit combining an electrical switch and flexible control to allow for remote switch operation has been announced by Arens Controls, Inc., Chicago. It is adaptable to all types of small machine tools. The control unit may be mounted at the point most convenient for the machine operator and the switch box which may be located either adjacent to the motor or convenient to the wiring.



The control head may be mounted by means of a 3%" hole through a panel, or, with a simple bracket, it can be mounted parallel to a table or on the edge of a frame or support. If desired an oil and waterproof covered casing may be obtained. There are several different models.

Use Free Post Card For More Details.

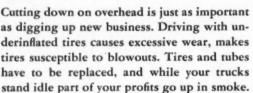
(Please resume your reading on P. 61)

FRUEHAUF EQUIPMENT CATALOGS

A completely illustrated, 16-page catalog covering truck and trailer accessories and equipment has just been released by the Fruehauf Trailer Co., Detroit.

Fruehauf has also issued a maintenance manual and parts catalog covering Model GT-55, which describes the new Gravity Suspension Tandem under construction. Copies of the booklets are available through Fruehauf factory branches.





Equip your entire fleet with Schrader Valve Caps—guaranteed air tight up to 250 lbs. pressure. They seal the air in at the valve mouth and help prevent underinflation, the Number 1 enemy of rubber tires. Think it over!



A. SCHRADER'S SON BROOKLYN 17, NEW YORK Division of Scovill Manufacturing Company, Incorporated

Thermoid the Longer-Life Line

THOUSANDS of Thermo-Block users testify to the fact that there's nothing quite so good as Thermo-Blocks. Tough or easy hauls, long runs or stop-and-start service are all the same to longer-life Thermo-Block brake linings.

One Thermo-Block user puts Thermo-Blocks in—"a class by

themselves." Another operator finds Thermo-Blocks keep his units operating longer with— "less time out for brake relining and drum repair."

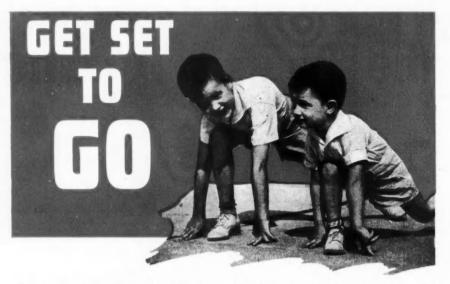
Try Thermo-Blocks yourself. Put them on just one of your units. Put that unit on the toughest job you have. Make Thermo-Blocks prove that longer brake life, safer, surer stops, lower maintenance and less down time can be a reality for you, too.



Thermoid
HE Longer-Life LINE FOR HEAVY-DUTY JOBS

Thermo-Blocks • Clutch Facings • Fan Belts • Radiator Hose

THERMOID COMPANY, TRENTON 6, NEW JERSEY



It's tune-up time again—the season to check plugs, points, and carburetors. But, don't forget, hot, summer driving has done its dirty work inside every motor! That baked-in film of sludge, gum, and varnish must be removed for trouble-free driving this Fall and Winter. Now's the time to get your clogged motors set to go—with Marvel Mystery Oil.

Added to crankcase oil, Marvel Mystery Oil gives you amazing solvent action combined with outstanding film strength:

Frees lacquered pistons • Cleans clogged rings • Eliminates oil pumping and blowby • Clears pump screens • Purges pressure lines to bearings • Armors all contact surfaces against wear.

And, added to gasoline, Marvel Mystery Oil protects your upper cylinder areas with sensational heat resistance:

Purges fuel feed lines • Loosens sticky valves • Dissolves varnish-cemented carbon on walls and valve seats • Resists high heat to better lubricate sizzling top cylinder areas.

It pays to treat every one of your motors with Marvel Mystery Oil. Make it a regular habit . . . it's sure to reduce wear, ward off repair, and save you considerable "down" time. Get set to go TODAY—with extra pick-up, pep, and power . . . order money-saving Marvel Mystery Oil from your Jobber NOW! Emerol Manufacturing Co., Inc., 242 West 69th St., New York 23, N. Y.







DETROIT DISPATCH

(CONTINUED FROM PAGE 88)

drives among dealers, just as they did during the war. In addition, the Automobile Manufacturers Association has prepared for COMMERCIAL CAR JOURNAL the following special appeal to fleet operators.

Urgent Scrap Drive Is On

"Truck fleet owners can help signally in this scrap drive. In normal operations of the fleet shop, much valuable scrap metal accumulates. Obsolete equipment, broken and wornout parts, and just plain odds and ends which may be gathering dust in little-used corners of their garages contain metals sorely needed to augment the supply of scrap iron, steel, lead and copper. By cooperating in this respect, they will not only be rendering a valuable aid to the industry, but will be bringing a little closer the day when they can get delivery of the new trucks they so badly want and need. They can simply call an established scrap dealer, or notify their truck dealer who will be glad to assist in moving the scrap."

END

(Please resume your reading on P. 90)

ALGER EXPANDS DETROIT TERMINAL FACILITIES

The Geo. F. Alger Co. is now in process of completing a \$150,000 plant expansion program in Detroit as well as a \$250,000 fleet expansion, according to A. C. Scott, Alger president.

The company has expanded its property by 7½ additional acres, doubling the former acreage. Transportation for a wide range of commodities, including steel and other heavy hauling, as well as general packaged freight, is offered.

Rail siding, which formerly accommodated only five cars, now takes care of 17. Steel can be delivered to this siding in rail cars as well as trucks, unloaded, stored and later delivered to consignees. There will be 10,000 square feet of new dock space with modern improvements. Additional provisions for vehicle maintenance are being made, with gas and oil facilities substantially enlarged.







d

ly in ir st

on

00 tt,

ty

nd

ral

17.

ail

nd

vill

ace

nal

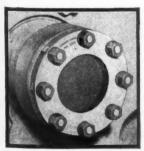
ies

NAL

Remove standard nuts and studs. Installionger studs furshed with kit; replace axle, using old nuts.



Remove axle shaft "pull-out" studs.



Place lock ring against hexagon nuts and use lock washers and hexagon nuts furnished with kit. Draw up tight.

REAR AXLE STUD LOCKING RINGS

FOR ALL POPULAR TRUCKS

Champ-Items Rear Axle
Stud Locking Rings fit
about 95% of all trucks.
Check these specifications
against your equipment
to determine proper Kit.
These patented rings—
made of steel—come in
complete Kits for each
truck or bus.

Packed individual sets of: 2 lock rings — all necessary Special Studs — Lockwashers and Nuts.

\$7.00 PER SET

Bolt Circle Diameter	Diameter of Stud	Number of Studs per Wheel	Champ-Items Stock Number
31/8"	Std. 7/16"	8	No. 500
37/8"	Std. 1/2"	8	No. 500A
43/4"	Std. 7/16"	8	No. 501
53/8"	Std. 1/2"	6	No. 502
53/8"	Oversize 9/16"	6	No. 502A
53/4"	Std. 5/8"	6	No. 502B
41/2"	Std. 7/16"	8	No. 503D
51/32"	Std. 7/16"	8	No. 504D
57/16" or 51/2"	Std. 7/16"	12	No. 515
57/16" or 51/2"	Oversize 1/2"	12	No. 515A
37/8"	Oversize 7/16" x 1/2"	8	No. 516
43/4"	Oversize 7/16" x 1/2"	8	No. 517
53/8"	Oversize 1/2" x 9/16"	6	No. 518
55/16" or 53/8"	Std. 7/16"	8	No. 519
55/16" or 53/8"	Oversize 1/2"	8	No. 519A

ORDER FROM YOUR JOBBER

Write Us For Complete No. 500 Specification Sheet

Std. 34

CHAMP-ITEMS, INC.



No. 520

Lock all studs together as one unit; provide the

extra bearing, stop rock

at tip and your stud troubles are over.



Fleet owners across the nation find RuGLYDE reduces their tire maintenance costs. This 100% safe, non-petroleum, penetrating rubber lubricant speeds mounting and dismounting of heavy duty bus and truck tires... and prevents tire and tube failures. RuGLYDE is recommended and used by major oil and tire companies and leading car manufacturers for two main reasons:

lst, for dismounting stuck or rusted tires, RuGLYDE applied to both sides of tire along the edge of bead creeps in rapidly, loosens and lubricates so that removal is accomplished with less time, strain and fatigue for the service man, and without danger of damage to the bead and rim.

2nd, tires mounted with RuGLYDE give longer service. Pinching and chafing are prevented because RuGLYDE provides proper lubrication to seat tubes and flaps with minimum pressure so that they slip — not stretch — into place. RuGLYDE will not induce rim rust or cause tire static which injures tubes. Harmless to wheel and rim finishes.

It's the scientific, ready-to-use, safe and economical rubber lubricant to reduce tire and tube failures, — lower labor costs. Order From Your Jobber Today.



WASHINGTON RUNAROUND

(CONTINUED FROM PAGE 84)

CPA Debates Export Order

Internal pressure is being exerted in CPA to have the motor vehicle export order, L-352, revoked. The CPA Automotive Division is resisting such a move.

Exports of cars and trucks have been in the news recently as a result of claims that large quantities were being shipped out of the country to the detriment of American consumers.

It is reported that CPA policy officials want to drop the limitation order to allow the responsibility for exports to fall on the shoulders of the industry.

Of the total production of trucks during the 10-month period—September, 1945, to June, 1946—amounting to 494,559 units, exports accounted for 16 per cent, or 78,910.

Veterans Before Production

A new policy on disposal of surplus parts is being developed by the War Assets Administration. This agency recently ruled that manufacturerers were not to be permitted to inspect surplus listings until two weeks after everyone else had taken a peek. In several instances, CPA cooperating with Army Ordnance was able to make available stocks of parts which enabled several producers to keep their lines running.

WAA Administrator Robert M. Littlejohn is reported to have taken an attitude of "to hell with new production; we must get the surplus out to veterans."

This short-sighted policy is up for revision. At the same time, WAA is expected to give its regional offices more authority in pricing and distributing replacement parts.

Washington Miscellany

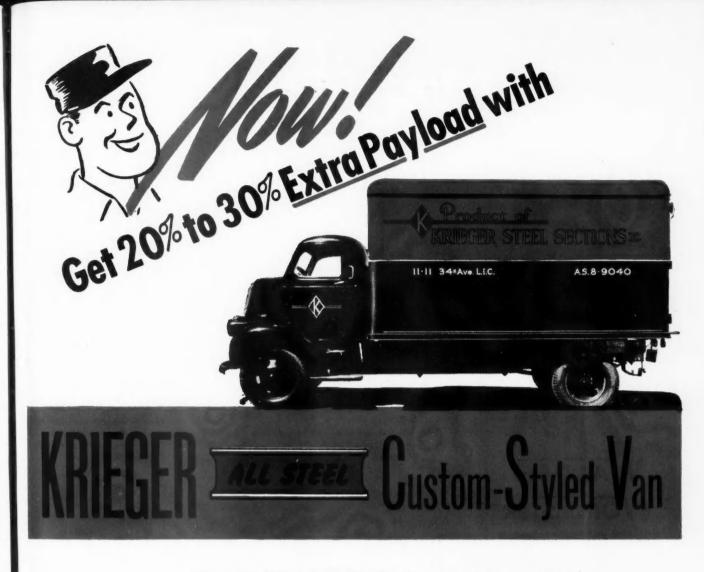
OPA has ruled that a truck trailer is not an "automotive vehicle" for the purpose of its service regulation. Why? Because it hasn't got an engine. . . . President Truman has established a Federal Committee on Highway Safety to coordinate the work of all governmental agencies, including state and local. Working toward the reduction of traffic accidents, the committee is composed of representatives of 13 different Government agencies. . . . Oil cans for lubricating purposes, dry batteries, motor scooters, sun glasses and goggles, hand-operated pumps, brake testers, a considerable portion of all road construction machinery have been removed from price control. . . . Unsatisfactory progress is reported on almost 25 per cent of bridges of 50-ft. span or over, and is attributed to the delay in delivery of materials on 48 per cent of the delayed jobs, scarcity of labor on 16 per cent, operational difficulties due to other work on 18 per cent and miscellaneous causes account for the remaining 18 per cent.

END
(Please resume your reading on P. 88)

Cu

ing

sec



Plus Extra Strength, Extra Beauty, Extra Permanence! Section Assembly Makes Replacement of Damaged Parts Easy, Inexpensive. Available in 12, 14, 16 Foot Body Lengths..ALL STEEL ROOFS!

Use of AW Dynalloy, the high strength, low alloy steel for structural sections of Krieger Custom-Styled Vans saves nearly a third on weight, increases your payload correspondingly! And for no more than you'd pay for ordinary vans, Krieger gives you the strength of all-steel construction, the beauty of custom-styling, the replacement of damaged sections at less than usual patchwork repair costs!

Your local Krieger distributor can give you on time delivery. Write us for his name. He is ready to serve you quickly, and more important, economically.



3 il

t-

n.

nt it-

nt

8)

AL

KRIEGER STEEL SECTIONS, Inc. 11-11 34th Avenue - Long Island City, N. Y.



WORCESTER MICROJUSTABLE WRENCH

Designed and Engineered by

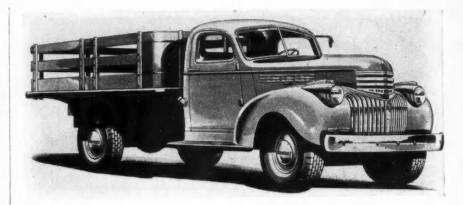
STEVENS-WALDEN, INC.

Drop Forged, Heat treated. STRONG WHERE STRENGTH IS NEEDED.....

Adjusts snugly to any size nut by quick acting thumb screw. Machined with Micrometer precision, Bright plated and highly polished This wrench is a prime necessity in every machine shop and garage. Made in seven sizes from a vest packet size of 4 inches in length to the 18 inch large size.

Send for Folder MICROJUSTABLE WALDEN WORCESTER

STEVENS WALDEN, INC. 468 SHREWSBURY STREET WORCESTER, MASSACHUSETTS



New ³/₄-Ton Chevrolet Has Full-Floating Axle

To round out its line of commercial vehicles, Chevrolet has just introduced an additional line of ¾-ton, all purpose trucks available in a wide variety of popular models. The basic 125¼-in. wheelbase chassis is offered optionally as stripped chassis and windshield or chassis and cab. It is also available with pick-up, platform, or stake body. Maximum gross vehicle weight is 5800 lb.

From the standpoint of mechanical features the most important is the adoption of a full-floating, hypoid-gear rear axle, similar in design to the axle used in the 1½-ton models. It has a ratio of 4.57 to 1 and a load capacity of 5000 lb.

The engine is the standard Chevrolet Thriftmaster and remains unchanged in specifications. Hydraulic service brakes are standard—11 x 1¾ in. at the front, 12 x 2 in. rear. The vehicle is equipped with the standard three-speed transmission but the four-speed truck transmission will be made available as optional equipment.

Tire equipment comprises single, socalled 15-in. commercial 6-ply tires all around. As optional equipment, Chevrolet will supply the 15-in. commercials in 8-ply; also 17 x 7.00 in. in 6-ply or 8-ply.

(TURN TO PAGE 264, PLEASE)



SERVICE

Остов

THE EIS AUTOMOTIVE CORP.

Middletown, Conn.

HERE'S THE BEST WAY TO REPAIR TUBES!

THE INLAND TUBE VULCANIZER

... and here's why

- Failure-proof repairs in your own shop
- 2 No more trouble with synthetic tubes
- 3 Easy and economical to operate
- 4 Handles all size tube injuries and valve stem repairs
- 5 For all size tubes

Now—with the new Inland Vulcanizing Unit in your shop, you can make professional tube repairs that hold up under long, tough highway driving.

Repairs even large breaks safely and dependably in 15 to 18 minutes. Injuries up to 6" long handled in one curing, on both natural and synthetic rubber tubes—plus all size valve stem repairs and replacements.

Eliminates waiting for tubes to be returned to your shop. Inland vulcanized tubes are ready to go back on the job without delay.



Included in this new Unit is Inland's famous thermostatically controlled vulcanizing press PLUS a complete stock of vulcanizing gum, cement, accessories and tools.

Requires little space. An Inland Service Engineer will teach you the few simple operations necessary to make repairs that last the life of the tube. Your automotive jobber has these units in stock now.

Inland Rubber Corporation, a subsidiary of Minnesota Mining and Manufacturing Co.





As one after another of America's scenic wonders flash past the windows of your comfortable motor coach, the chances are that you are enjoying a vacation powered by Red Seal engines. Continental is currently producing several series of gasoline and Diesel engines, which provide a complete range of power for highway coaches, for interurban and city buses, and also for school buses.

Coach manufacturers and operators have turned to Continental power for the reliability, economy, and stamina needed for 365-day-a-year operating efficiency.

Soon, many of these coaches will be air conditioned for your greater comfort, and the conditioning unit itself will be powered by Continental. Today it is more true than ever before, that wherever there's work to be done — for industry, aviation and on the farm, as well as for transportation, Continental Red Seal Engines are on the job.

Continental Motors Corporation
Muskegon, MICHIGAN

CONTINENTAL
TRU-RATED POWER

BUILT
FOR THE JOB!

No Oil Ranks Higher Than Wolf's Head ALL FIVE HEAVY DUTY FACTORS Strong, Tough Film Detergency Dispersancy Resistance to Oxidation and High Engine Temperatures Non-Corrosive to Bearings

It takes all five heavy duty factors to make a good heavy duty oil. And when it comes to picking the oil that stands highest on all five points . . . there's only one choice . . . Wolf's Head Heavy Duty.

In laboratory tests as well as in actual fleet units on the road Wolf's Head superiority on all five counts is a proven, incontestable fact. A few competitive oils equal Wolf's Head rating on one or two factors, but no oil ranks as high as Wolf's Head on all five heavy duty factors.

That's why more and more fleet operators insist that Wolf's Head Heavy Duty be used in their units exclusively. They know from experience that top quality, "all-five" engine protection can be expected only from the top quality oil that has top rating on all five heavy duty characteristics.

Find out what Wolf's Head can do for you. Send for the free heavy duty booklet that shows the results of impartial and unbiased tests. Wolf's Head Oil Refining Co., Inc., Oil City, Pa., New York 10, N. Y.

LABORATORY CONTROL SERVICE Gives fleet owners specific recommendations for their units, based on analysis of crankcase oil. Helps to establish correct drain periods, conserve engine life, reduce lay-ups—frequently reveals unsuspected engine troubles. Free and without obligation.

WOLFS HEAD

100% Pennsylvania



P.G.C.O.A. Permit No. 6

10 minutes to wash a Truck!

This **SPEED WASH** fountain brush takes the drudgery out of truck washing. Clean, fresh water is continuously fed to the surface, from a standard size hose, through the handle and brush. Soaking, scrubbing and rinsing are done in one easy and fast operation. All told, the washing job takes about 10 minutes. Speed Wash fountain brushes have been proved on so many thousands of trucks, trailers and trains that they are sold on a money-back guarantee. Order yours today. Include check \$1175

MILWAUKEE DUSTLESS BRUSH COMPANY 524 NORTH 22ND STREET MILWALKEE 3 WISCONSIN

or money order for post-paid shipment.

Five foot steel tube handle has standard have coupling. Brush, 11' wide is easily able at low cost.

Eight evenly spaced jets in the block hair tuths. The steel back over the block is a steel reservoir. The entire brush

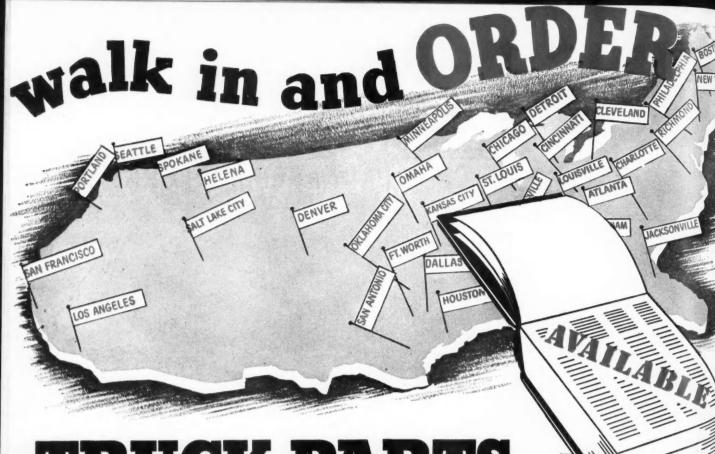
MILWAUKEE DUSTLESS BRUSH CO. 526 N. 22nd St., Milwaukee 3, Wis.
Please ship Speed Wash brush(es). It is understood that we can return this equipment within 30 days for a full refund of our money if the Speed Wash doesn't prove entirely satisfactory.
Firm Name
Address Please send us information on "Dustless" floor brushes "Speed Sweep" floor brushes Other floor maintenance aids.

Ост

FINISH 'EM FASTER

AND WITHOUT COMEBACKS— USE "FACTORY PACKAGED COLORS"





TRUCK PARTS

at any of these Regional Offices

War Assets Administration has them! And now it's easy for you to order what you need. You can tell at a glance whether we have what you're looking for. Information is kept strictly up-to-date on 11,000,000 truck parts . . . all inventoried by manufacturer's part number.

This is your chance to get the parts you need without waiting, without reams of red tape. Visit the Automotive Parts Section Chief in your nearest WAA Regional or District

WAA POLICY ON DUPLICATE ORDERS

A few parts are in limited supply. When duplicate orders are received the parts are allocated equitably to the duplicating buyers. You know what that means—your chance to buy is as good as the next man's, for there is no bidding; there are no preferred "old customers." It also means you can't expect to hit the jackpot on shortage items. We'll try our best to fill your order, but the other fellow has to have his share, too.

Office. You can place orders at once and get prompt shipment, prepaid. If the parts you want are not on the available list, you'll find out about it right there! For every Regional Office maintains a copy of the Perpetual Inventory which is controlled centrally in Detroit. Information is never more than twenty-four hours old.

Remember, this inventory listing of available automotive parts is for your convenience. Make *full* use of it in your parts requirements.

DISCOUNTS

(Discount off manufacturer's list price as shown in catalogue. Minimum sale—\$500 net) Distributor, 75% Vehicle Dealer, 55% Service Garage, 50%

Fleet Owner (5 or more vehicles), 45%

This material is offered in the following sequence as provided by law: (1) Certified Veterans of World War II; (2) Subsequent priority claimants; (3) Non-priority purchasers. Federal agencies have had opportunity to

fulfill their needs. VETERANS OF WORLD WAR II should apply to their nearest WAA Regional Office for certification; the case number assigned and the location of the certifying office must be stated in a Veteran's offer to purchase.

All orders are subject to prior sale. Items in short supply are equitably allocated. Place your order today.

WAR ASSETS ADMINISTRATION

Offices located at: Atlanta · Birmingham
Besten · Charlotte · Chicage · Cincinnati
Cleveland · Dallas · Denver · Detroit · Fort
Worth · Helena · Houston · Jacksonville
Kannas City, Ma. · Little Rock · Los Annal

GOVERNMENT OWNED SURPLUS Louisville - Minneapolis - Nashville - New Orleans - New York - Oklahoma City Omaha - Philodelphia - Portland, Ora Richmond - St. Louis - Salt Lake City - Sea Nathona - Son Francisco - Seattle - Sookane

PERPETUAL

ir

OCTO!

The national inventory is compiled not Supplemental listings are issued of the month. When items are exhat each of our field affices is notified in diately so that its inventory may be current.

Every Regional and District Office a copy of the inventory. Each orde truck parts is promptly transmitted to National Automative Parts Office in troit, Michigan. The Detroit Office of the order against the consolidated petual inventory and issues shippin structions with immediate notification of the proper Regional Office. Place order today.

HOW TO USE TO BUYING

- Go to your W. A. A. Regional or District Office
- Ask for the Automotive Parts Section Chief
- Examine the inventory
- Place your order
- That's how simple it is!



into Your Truck and Trailer Equipment!

You can do both at low cost by using Republic High Strength Steels for body structural parts.

The high strength of these steels (a minimum yield point of 50,000 pounds) combines with their resistance to atmospheric corrosion to permit the use of thinner and lighter sections without any loss in service life or safety.

Thus, profit-eating deadweight of truck and trailer bodies can be substantially reduced—with these results: (1) Greater payload capacity; (2) Reduced fuel consumption; (3) Less tire wear; (4) Lower maintenance costs—all of which add up to more profit and longer life of equipment.

To help designers and builders of truck and trailer equipment obtain greatest benefits for fleet owners, Republic offers three different high strength steels—Republic ALDECOR, Republic COR-TEN and Republic DOUBLE STRENGTH—in sheets, strip, plates and bars.

And Republic's metallurgical staff is ready to assist in the selection of the steel best suited to each particular need. Just write to:

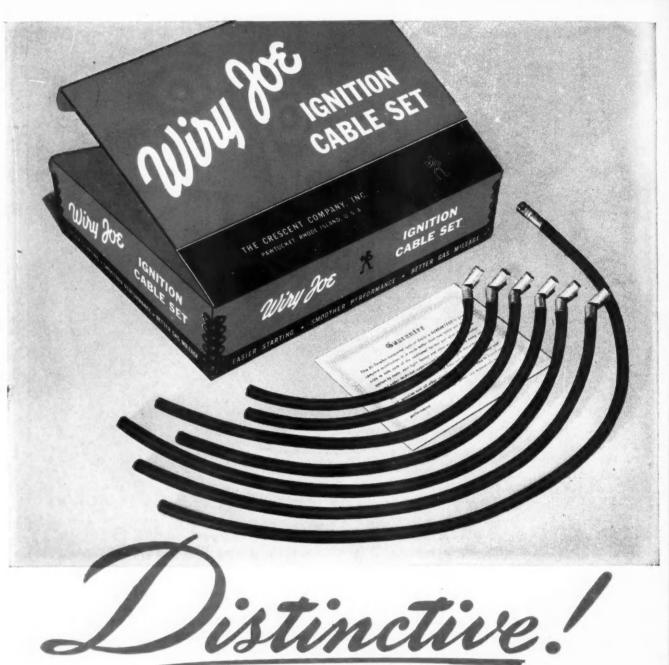
REPUBLIC STEEL CORPORATION
GENERAL OFFICES • CLEVELAND 1, OHIO
Export Department: Chrysler Building, New York 17, New York



Other Republic Products include Carbon, Alley

ffice

SE T



Crescent Wiry Joe ignition sets are distinctive—in color, in quality, in packaging! Check these outstanding Wiry Joe features:

LACQUER: Wiry Joe special maroon lacquer, applied in as many as twenty-four coats, provides an outer covering highly resistant to heat, cold, gasoline, oil, grease, moisture, salt air, corona.

BRAIDING: Wiry Joe braids are made of soft, combed, or super-carded yarns of first quality.

INSULATION: Wiry Joe insulation has outstanding dielectric properties, due to exclusive Wiry Joe developments in compounding synthetic rubber.

PACKAGING: Wiry Joe attractive, sturdy, metaledged packages increase shelf-display value; protect the ignition set up to the point of installation.

VCHECK THE WIRE ON EVERY JOBI



face

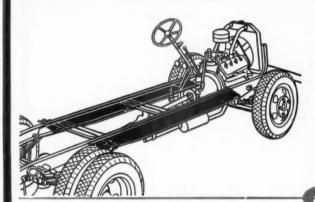
bear

М С

"FORD TRUCKS LAST LONGER!"



One big reason— FORD FRAMES STAND UP!



One of the big reasons why 78 per cent of all Ford V-8 Trucks ever built are still in use, is found in Ford frame engineering. Ford Light Duty Half-Ton units, for instance, have true truck frames—parallel side-rails—full SAE 34-inch width, taking standard bodies—rear kick-up and side-mounted springs for extra-low load height—alligator jaw cross-member—great strength and rigidity, for longer life to cab and body. The full-channel side-rails of Heavy Duty frames are doubled between springs, as illustrated, increasing side-rail strength 46 per cent—a construction far superior to old-fashioned fishplates.



Only Ford offers all these long-life features: choice of 2 great engines, the 100-H.P. V-8 or the 90-H.P. Six—Flightlight aluminum alloy, 4-ring pistons—short, rigid, fully counterbalanced cast alloy steel crankshaft—big brakes, with non-warping, score-resistant cast drum surfaces—extra heavy sheet steel in fenders, hood, cowl and cab—4-pinion differential with triple roller bearing, straddle-mounted axle drive pinion.

There are more than fifty such examples of Ford

endurance-engineering in today's Ford Truck. NO OTHER TRUCK BRINGS YOU ALL THESE IMPORTANT EXTRA VALUES AT ANY PRICE. Each one adds to the years of faithful service you can confidently expect from your Ford Truck. Let your Ford Dealer point them out to you.

FORD TRUCKS

MORE FORD TRUCKS IN USE TODAY THAN ANY OTHER MAKE



MONROE E-Z RIDE TRUCK SEAT

with Hydraulic Shock-Absorber Control

The modern truck today is equipped with a Monroe E-Z Ride Truck Seat specifically engineered to give greater efficiency and safety by taking the punishment out of truck driving.

Designed as a unit on principles long applied in developing riding qualities in passenger cars, farm tractors and deluxe railroad cars, the Monroe E-Z Ride Truck Seat protects truck drivers from the twisting, pounding jars and jolts that hasten fatigue, damage health and reduce efficiency. Every truck driver will appreciate its smoother safer ride.

Monroe E-Z Ride Truck Seats will fit most trucks. Their installation will quickly pay for itself in BETTER HEALTH... GREATER SAFETY... GREATER COMFORT... LONGER FNDURANCE

Now available for 1938-46 Dodge Truck—models for International, GMC, Ford and Chevrolet available shortly.



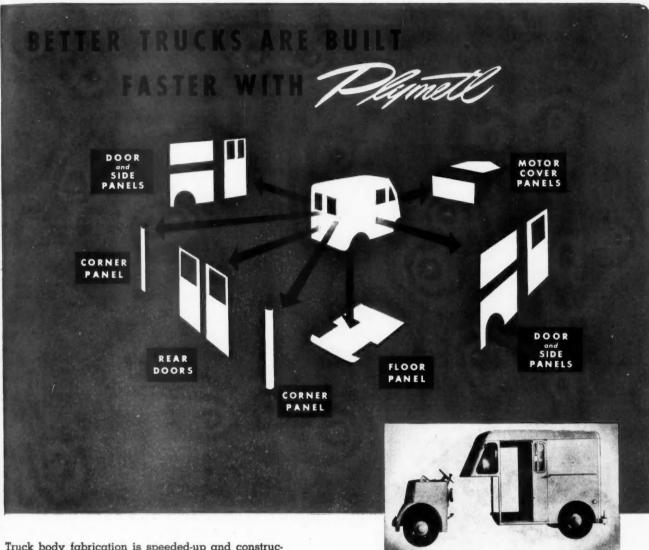


MONROE E-Z RIDE TRUCK SEAT

- Special Monroe Direct Double-Action Hydraulic Shock Absorber controls jars and jolts.
- Exclusive variable-rate coil spring acting in unit with Monroe hydraulic shock absorber assures easy-chair comfort for driver of any weight. No adjustment required.
- Pivot point and stabilizer bar take care of side sway—just as important to health and endurance as cushioning the up-and-down jolts.

Originated and manufactured exclusively by

MONROE AUTO EQUIPMENT CO., MONROE, MICH.



Truck body fabrication is speeded-up and construction cost reduced because Plymetl can be worked easily and applied quickly. When Plymetl is used in body construction, fewer and lighter framing members are required than in ordinary sheet metal construction. Also, fewer and less complicated fastenings are required for Plymetl.

The body builder using Plymetl has a more salable product. For example, weight reductions as high as 2,940 lbs. have resulted in a single bakery trailer by the use of Haskelite Plymetl. This reduction in deadweight permits the operator to increase his payloads. Also, Plymetl's greater resistance to impact and denting assures the operator of longer, more satisfactory service with less maintenance cost. Plymetl's inherent insulating and sound-deadening qualities are added values that appeal to fleet owners.

The Marmon-Herrington DeliVr-All unit shown above typifies another ideal application for Plymetl . . . and demonstrates how body builders can build better trucks faster . . . with Plymetl.

WRITE FOR COMPLETE DATA AND SAMPLES

The new bulletin, "Plan With Plymetl," tells you what Plymetl is . . . what is does . . . and how it does it. Learn how you can benefit through the use of Plymetl. Write for your free copy today.



HASKELITE

MANUFACTURING CORPORATION

DEPT TC-5

GRAND RAPIDS 2, MICHIGAN

NEW YORK

CHICAGO

DETROIT

PHILADELPHIA

CLEVELAND

LOS ANGELES

ST. LOUIS

CANADA: Railway & Power Engineering Corporation, Ltd.

AT.



TULSA WINCHES GET

IN LESS TIME!

Judging from the field reports, TULSA WINCH is built for those heavy-duty jobs . . . designed for long years of trouble-free service . . . made to out-last the average truck. And because they've won this repute, Tulsa Winches are being installed on more trucks every day . . . they get more work done in less time, which means time, money and man-hours saved! Tulsa Winches are conservatively rated with ample margin for safety. Literature on request.

GET MORE WORK DONE

BECAUSE OF:

SMOOTH OPERATION,
made possible by superior engineering.

NO BREAKDOWNS,

for each Tulsa Winch is built of selected materials, and designed for rugged work and long life.

SAFETY FEATURES,

single thread worm and gear; automatic worm brake.

PERFORMANCE,

rated outstanding where ruggedness and dependability are required.

Tulsa Winch.

TULSA, OKLAHOMA VICKERS INC.



Powerful

The power of the atom bomb is awesome and spectacular. The power of a Hein-Werner Hydraulic Jack is unpretentious in comparison—yet it is just as positive and much more useful for automotive service needs.

For lifting anything, from a jeep to a bus, depend on an H-W Hydraulic to do it faster, safer and more economically, due to H-W precision engineering and manufacture. Easyoperating, dependable, POWERFUL H-W Hydraulics include models of 3, 5, 8, 12, 20, 30 and 50 tons capacity, as well as service jacks for shop use. For details see your H-W jobber, or write us.



Hein-Werner

BUILT RIGHT

HEIN-WERNER MOTOR PARTS CORPORATION . WAUKESHA, WISCONSIN

DEGREASE.. BETTER-FASTER!



Sally Soax Says . . .

"YOU'LL SAVE TIME . . . YOU'LL SAVE MONEY BY USING SOAX SIXTY ON ANY CLEAN-ING OR DEGREASING JOB"

Whether for cleaning the greaslest floor, lift or walls - washing cars - or degreasing motors, truck bodies or parts, you'll find Soax Sixty the slickest, most economical cleaner you've ever tried. One part of Soax Sixty mixed with 15 parts kerosene will handle the toughest job. Cuts as high as 30 parts kerosene are readily possible

... AN ECONOMICAL CONCENTRATE THAT MIXES WITH EITHER KEROSENE OR WATER

IXT DEGREASER

on ordinary jobs. A few ounces in a bucket of water will put a "like new" finish on any car washing job. No chamoising necessary. Absolutely harmless to the hands, metals or pigmented surfaces. Handily packed in gallon cans. Regardless of your cleaning job, you'll like the way it works - and its pleasant odor!

CLEAN IT THE "SOAX" WAY

Sales territories open ... inquiries invited from Manufacturers' Agents

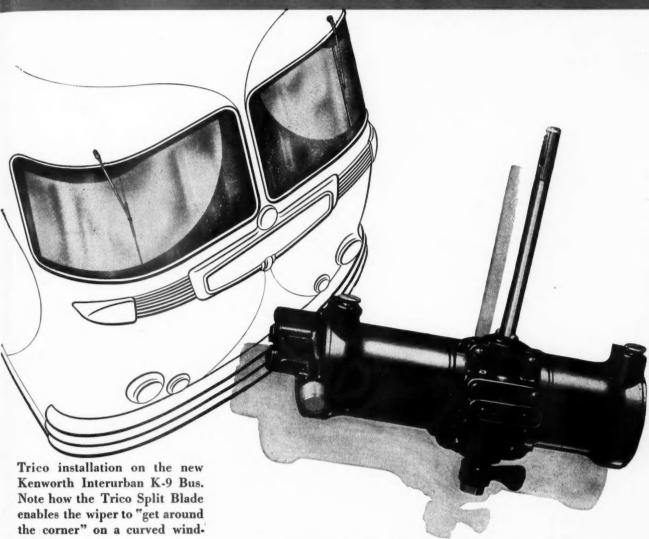
ORDER TODAY! Featured by leading JOBBERS

E · A · GERLACH CO.

410 BEURY BLDG., PHILADELPHIA 40, PA.

MAKERS OF 70 STRIPPER . SOAX . JELZINE . SPRUCE JELL AND OTHER FAMOUS AUTO & AVIATION CLEANERS & CHEMICALS

for HEAVY DUTY in Heavy Weather



shield.

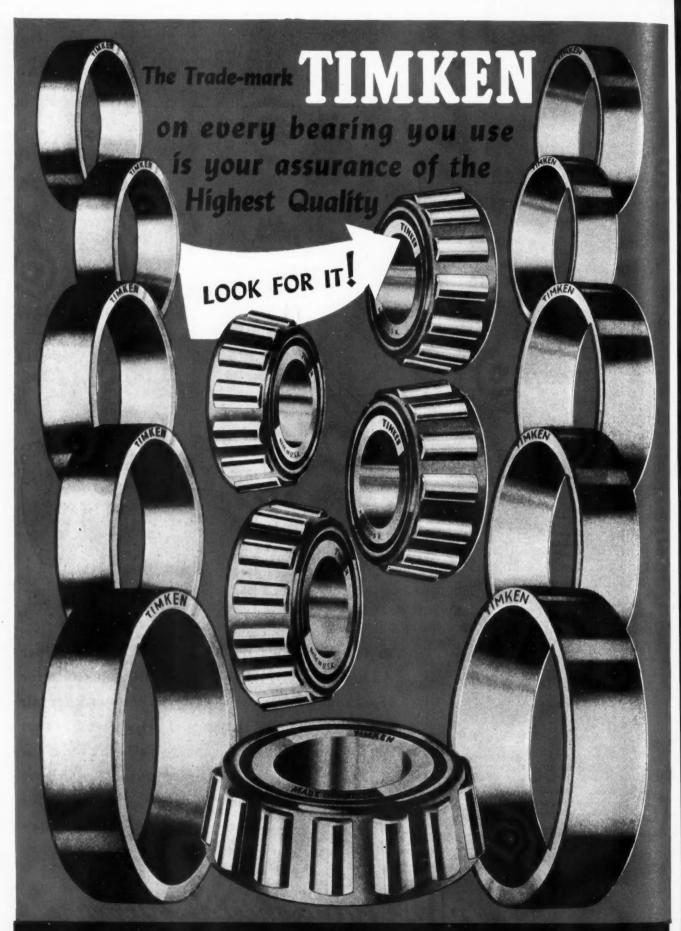
For Trucks or **Buses Without Air Pressure**

The new Trico VACUUM Motor gives more powerful action than ever before. Continuous service under load is provided by the auxiliary Reservac, now available in new economy capacity.

• The new Trico Heavy-Duty Windshield Wiper AIR PRESSURE Motor is built especially for trucks and buses with air brakes or other air supply ... and for the rugged dependability that such vehicles require when weather conditions are toughest. Available as motor alone for replacement . . . or as a complete wiper unit for new installations such as the one on the new Kenworth Buses shown above.



TRICO PRODUCTS CORPORATION, BUFFALO 3, N. Y.



THE TIMKEN ROLLER BEARING COMPANY, CANTON 6, OHIO





Here is the dynamic heavy-duty truck of the year. Never before has there been such a powerful truck with all the features and economies of the mighty Ward LaFrance.

These big, rugged over-the-road tractors are engineered by Ward LaFrance, manufacturer of the Army's giant M1 tank reconnaissance wrecker and the famous Ward LaFrance fire truck double assurance of extra power and stamina.

Look for the big truck with the exclusive "flat top" fender



WARD LAFRANCE TRUCK DIVISION Great American Industries, Inc.

ELMIRA,



NEW YORK

for over Twenty-five Years



EVEN A "DÉAD DUCK" CAN PACK A PUNCH



CONTROLLED BRAKING

COMPLETELY

Eliminates brake lag, improves safety factor, simple and quick to install, cuts tire wear and fuel consumption, reduces maintenance.

When brakes depend upon the motor for power, they will not function when the engine is "dead". Costly delays and accidents can be the result.

HYCON brakes are compound cylinders that operate whether the motor is running or stalled . . . at any altitude or temperature, they cannot freeze. They are 100% hydraulic and deliver hydraulic pressures in direct proportion to the pressure on the brake pedal. There is no lag due to atmospheric pick-ups by vacuum or air boosters. The driver has positive brake control at all times, whether his truck is fully loaded or empty; whether roads are slippery or dry.

SAVE GAS-SAVE ENGINE WEAR

Since HYCON brakes do not depend on the motor, the carburetor may be adjusted to the greatest idling efficiency, saving gasoline and engine wear and tear.

HYCON is controlled braking which eliminates overbraking and reduces tire-scuffing. Simple and economical installation is possible because no special equipment is needed; few adjustments are required; and no maintenance beyond that of original equipment master cylinders is necessary.

INSTALL A TRIAL UNIT

You can prove for yourself the superiority of the HYCON compound cylinder. Now available are units to replace 1¼" and 1½" Di. original equipment master cylinders. Order a trial unit from your local power brake distributor, or write the New York Air Brake Co., 420 Lexington Ave., N. Y. 17, N. Y.

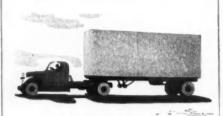
Look for this Registered Trade Mark



420 Lexington Avenue, New York 17, New York



What do you haul ?



















Your own tire records will prove it!

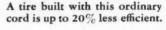
• No matter what the load . . . where you haul it over the road . . . you're right when you equip with Thorobreds. It takes "built-in" guts to stay on the job . . . every job . . . every day.

Thorobreds are tougher, stronger, longer wearing than ever. New rayon cord construction provides a 20% stronger carcass . . . cooler running tire. It's sound economy to buy the tires that do the most for the lowest cost.

Your own tire performance records will prove you get still more for your money when you buy Thorobreds, and at lower cost per mile, too. If you aren't keeping mileage records of tire performance and need help to set them up, call the nearest Independent Dayton Tire Distributor, or write to The Dayton Rubber Manufacturing Company, Dayton 1, Ohio.









* The Fighting Heart of each Dayton Thorobred is now reinforced with NEW 2200 Denier type Rayon Cords. Larger, super-strong, heat-resisting *Raytex cords welded by a special Dayton process to "float in rubber".

*Dayton Processed Rayon Cord





If a jobber's first thought is for quality, Packard is his first choice in cable. For Packard is an independent line that has won manufacturer, dealer and jobber preference strictly on the basis of quality. This outstanding product—backed by an organization that makes only

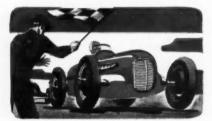
cable in the automotive field—needs no "tie-in sales" or "package deals."... That's why you can be sure that the jobber who offers you Packard cable builds his business on sound and enduring values. And that's why you can depend on him for "first choice" products of all kinds.

HERE'S WHY YOUR JOBBER CARRIES PACKARD CABLE



He Believes in Quality

... knows that Packard research and manufacturing are concentrated on one line—automotive cable. That's what Packard's been making for more than 40 years.



He Believes in Leadership

. . . has watched Packard lead the field in the use of plastics, lacquers, synthetics and other developments to make cable last longer, perform better.



He Believes in Sales

. . . knows that Packard cable has better acceptance, because it is used as original equipment in more new cars than all other makes of cables combined.

YOU'RE RIGHT WITH

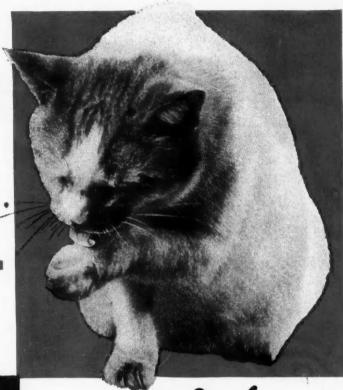
REG.U.S. PAT. OFF
TRADE MARK

PACKARD ELECTRIC DIVISION
GENERAL MOTORS CORPORATION
WARREN, OHIO

FOREMOST BUILDER OF AUTOMOTIVE AND AVIATION WIRING

MOTOR OIL MOTOR CLEAN CAN'T CLEAN ITSELF...

BUT-



ENGINEERED FILTRATION WILL KEEP IT CLEAN



FILTERS AND FILTEREFILS
WIX ACCESSORIES CORP'N GASTONIA N.C.

Warehouses: ATLANTA • CHICAGO • DALLAS • KANSAS CITY • LOS ANGELES • MINNEAPOLIS NEW YORK • SAN FRANCISCO • Canadian Factory: WIX ACCESSORIES CORP., LTD., 11 Wabash Ave., Toronto 3, Ont.

sed

4 G

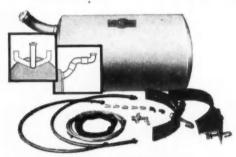
NAL



very Prior Safety Tank is equipped with a replaceable SAFETY Fuse Plug to protect your trucks against the hazards of explosion. Tanks are sturdily built of 12-gauge steel, electrically welded throughout, with full dished heads. Vented filler tube cap has a ball check to stop gasoline leakage, should the tank be overturned.

Illustrated above is the popular Prior Safety Tank and Tool Chest Set, designed especially for tractor-drawn vehicles. Exclusive features are the jack well, and the curved suspension brackets which give greater ground clearance. The cover, which may be locked securely, has a special non-skid design to make it a serviceable cat-walk.

There's a PRIOR Safety TANK to Fit Your Needs



PRIOR End-Fill TANKS

This 18" End-fill Tank has an adjustable filler tube which makes it adaptable to any stake-body truck or bus, and will fit either right or left side. If necessary, the tube may be easily lengthened with standard couplings and pipe. It comes complete with fittings and suspension brackets down to the last nut.



PRIOR Safety TANK PAIRS

The Tanks and suspension brackets for Prior Safety Tank Pairs are identical with those of the Prior Safety Tank and Tool Chest Sets. A special, rough tread cat-walk is available to fill in the space normally occupied by the tool chest in the Tank and Tool Chest Sets. All Prior Tanks are built for heavy duty. They're pilfer proof; provide large fuel capacity for long hauls without frequent re-fueling stops.

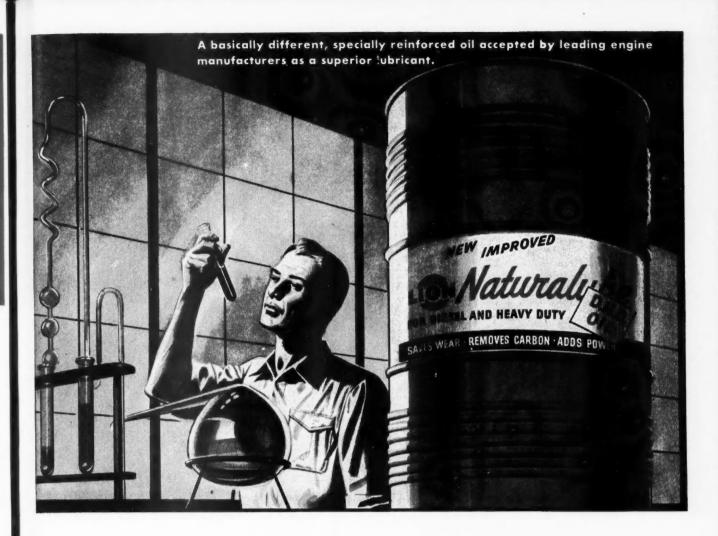


ELECTRIC GAUGE

An electric fuel gauge, with dash mounted indicator, is available as optional equipment at extra cost. When Tank Sets or Pairs are used, indicator will show amount of fuel in either right or left tank, at the flip of a switch.

WRITE OR WIRE FOR NAME OF NEAREST DEALER

PRIOR PRODUCTS, Inc . DALLAS, TEXAS . MIDDLETOWN, OHIO



RESISTS SLUDGE FORMATION REMOVES HARD CARBON REDUCES WEAR

Nature and science combine to make Naturalube D. H. D. the finest oil you've ever used, for special Lion processing of this basically different crude oil provides extra resistance to the formation of sludge and lacquer—the effects of heat and oxidation.

From Nature, Naturalube D.H.D. gets a tougher protective film... natural solvent properties that en-

able it to remove hard carbon...
greater ability to penetrate to all
moving parts of an engine and
adhere to those parts even when
engines are idle...and non-corrosiveness.

Ask your local Naturalube distributor about D. H. D. or write direct to Lion Oil Company, El Dorado, Arkansas.

For normal service, where D. H. D. is not required, use Naturalube Motor Oil (not so heavily reinforced).

Naturalube D. H. D. is supported by a positive money-back guarantee of satisfaction. If you don't believe it is the best oil you've ever used. Lion Oil Company will return your money.



LION OIL COMPANY EL DORADO

GE

uge, indi-

op-

s or

fuel ank,

110

JRNAL



THAT

oil-important

increfuln 50%

Bower design being most effective where most important, note the effectiveness of this all-important oil groove • At this critical point, where the roll head thrusts itself against the cone flange, the lubrication problem is most serious • Here Bower design provides an oil groove that holds a generous supply of lubricant • Add to this the fact that the roll head has a generated spherical contour • Add also the fact that the flange against which it turns is generated to inverse spherical contour to exactly fit the roll head • These spherical surfaces rigidly control alignment of rolls and present the maximum area to defeat wear • Combined with abundant lubrication, this design feature makes it possible for Bower Tapered Roller Bearings to endure throughout their operating life without adjustment after once installed • This is what is meant by "Most effective where most important."



BOWER ROLLER BEARINGS

RAIN









Simple, strong construction means easy assembly, minimum loading area. No protruding fastenings in body to damage cargo. Heavy-duty, waterproofed, mildewproofed No. 10 duck cover assures long-life.

STRONG

Lightweight, high tensile, rustproof aluminum frame. All parts of frame supporting cover have smooth, round edges to minimize cover wear.

Get a Caravan Top for every pickup body! Ask your dealer for literature. Please send dealer's name if you order direct.



effec-

e roll

most

rous

rated

ns is

hese

naxi-

s de-

dure

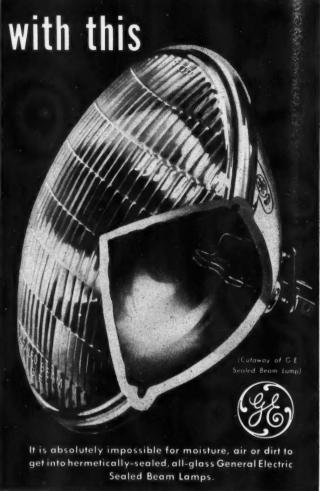
alled

ant.'

G S

CORPORATION . . South Bend, Indiana





Install G-E Sealed Beam, the lamp that DOES NOT GROW DIM!

If headlamps grow dim, seeing distance is cut—often without the driver's knowledge. If he can't see in time, he can't stop in time! An object which would be visible when lights were new might be seen too late if lamps grew dim. . . . This can't happen with G-E Sealed Beam Headlamps! It has

been proved by actual tests that, on the average, they maintain 99% of original light output right up to the end of lamp life. Make sure your drivers have plenty of light on the road for safe night operation. Replace with G-E—the lamp that DOES NOT GROW DIM!

"ALL-GLASS" SEALED BEAM

G-E LAMPS

GENERAL & ELECTRIC



Is their visibility hampered and slowed down by cracked or discolored glass?

Remember . . . a split-second delay in seeing the hazard is a split-second delay in avoiding trouble.

For greater safety, make inspection of windshields and windows a routine part of your fleet checkup.

Replace cracked or discolored glass with L·O·F HI-TEST SAFETY PLATE GLASS This high-quality product is made of two panes of plate glass, ground and polished for maximum freedom from distortion and laminated with a sheet of clear, tough plastic.

Specify L.O.F. Hi-Test Safety Plate Glass—in

Specify LOF Hi-Test Safety Plate Glass—in windshields and windows—for replacement and for your new equipment. To make it clear that your equipment is glazed with a quality product, be sure that the stenciled identification, "LOF Hi-Test Safety Plate Glass", is visible after installation. Libbey-Owens-Ford Glass Company, 71106 Nicholas Building, Toledo 3, Ohio.





LIBBEY · OWENS · FORD

a Great Name in GLASS

age,

t up

have

ion.

TOI

NAL



protects permanently against VIBRATION

The adoption of ESNA Elastic Stop Nuts on terminal connections has been a contributing factor to the outstanding reputation of Autocar Trucks for continuous heavy-duty service.

Early test runs proved that ordinary fasteners vibrated loose. Lock washers tore terminal connections and steel fasteners permitted electrolysis and corrosion to 'freeze' mated parts.

Final tests prove that self-locking, selfsealing brass ESNA Elastic Stop Nuts repay their application cost many

times over. Their vibration-proof grip makes night driving safer by

preventing light failures . . . makes continuous performance more certain by preventing ignition failures . . . makes engine fires less likely by preventing destructive arcing. And easy removal speeds servicing.

ESNA Elastic Stop Nuts protect against Vibration, Corrosion, Liquid Seepage, Thread Failure and Costly Maintenance. They permit full fastener standardization -and its resultant economy. For further information address: Elastic Stop Nut Corporation of America, Union, New

> Jersey. Sales Engineers and Distributors are conveniently located in many principal cities.



THE SYMBOL OF SECURITY

It is threadless and permanently elastic. Every bolt — regardless of commercial tolerances — impresses (does not cut) its full thread contact in the Red Elastic Collar to fully grip the bolt threads. In addition, this threading action properly seats the metal threads—and eliminates all axial play between bolt and nut threads.

All ESNA Elastic Stop Nuts - regardless of size or type - lock in position anywhere on a bolt or stud. Vibration, impact or stress reversal cannot disturb prestressed or positioned settings.

LASTIC STOP NUTS







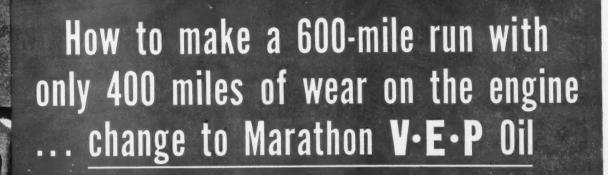








ODUCTS OF: ELASTIC STOP NUT CORPORATION



V.E.P. Oil makes engines last up to 50% longer than they would with ordinary oil . . . do up to 50% more work between overhauls . . . proved in 9 straight years in all types of internal combustion engines

Cut down engine wear on your mileage and you're money ahead. Fleet owners, bus lines, cab operators know this. That's why so many have changed to Marathon V.E.P., the heavy-duty detergent oil that was pioneered before the war, made good all during the war, and is way ahead today. V.E.P. will give you up to 50% longer engine life, up to 50% more miles between layups for repairs. You'll get more economical mileage, have more dependable engines. Worth looking into, right away. Find out how just changing the oil can change your profit picture . . . how you can be sure of an extra margin of profit on your operations with V.E.P. Oil. Call your local Marathon dealer, or write, wire or phone The Ohio Oil Company.

- V.E.P. has more than twice the film strength of ordinary oil; resists heat, shock loads and pressure.
- V.E.P. cleans engines . . . keeps them clean; dissolves the binder that holds sludge together.
- V.E.P. reduces carbon and varnish to a minimum; prevents corrosion.
- V.E.P. is non-foaming, free-flowing. Has a "magnetic-like" action which prevents damaging "dry" starts.
- V.E.P. frees stuck valves and rings; prevents blow-by, loss of compression.

Marathon V.E.P. 300 Series meets the rigid requirements of U.S. Army Specification 2-104B and has been used by the Ordnance Department. Approved by leading equipment manufacturers as a superior All-Purpose Lubricant and Heavy-Duty Oil.

GENERAL OFFICES: FINDLAY, OHIO District Offices: Robinson, Ill., Indianapolis, Ind., Louisville, Ky.

Producers of Petroleum since 1887

The Ohio Oil Company produces all types of automotive greases and lubricants for every fleet requirement of trucks, tractors, and trailers



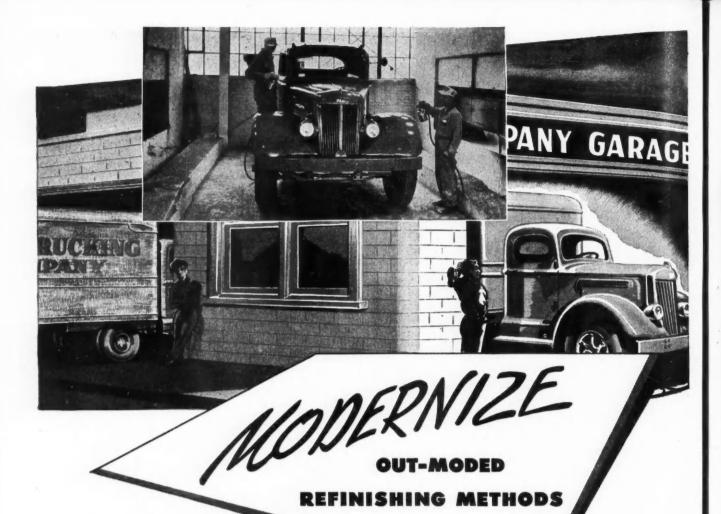
"...one International...has run approximately 150,000 miles on V.E.P....still op-

erating 100% with original

pistons and sleeves.

CA

NAL



DEVILBISS EQUIPMENT ENDS PAINT SHOP DELAYS—SPEEDS TRUCKS THROUGH THE PAINT CONDITIONING PROCESS . . .

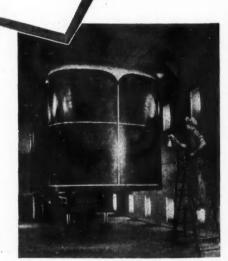
IME lost in the paint shop means less freight revenue! Modern DeVilbiss Equipment ends needless paint shop delays-makes quality painting easier, faster, more economical.

DeVilbiss provides production line speed in all painting operations. Segregated painting departments with water wash exhaust systems and special lighting improve working conditions-assure top quality finishes-save valuable manhours in sanding and polishing time. A wide range of Spray Guns and Equipment provides for fast, high quality touch-up, complete refinishing or underbody coating work. Good-looking trucks are your best advertisement. Keep them well painted and protected with modern DeVilbiss Equipment that has speeded up painting operations as much as 50% and reduced costs

from 20% to 30%. THE DEVILBISS COMPANY, Toledo 1, Ohio . Conadian Plant: Windsor, Onto







ten

tire

freq

Sta

Wit tru

life fact

Oc:



Trucks parked by wayside restaurants are familiar sights all along America's highways. Tourists have come to take them as signs of a good place to stop for a snack... But truck fleet owners and maintenance managers know that, much more often, they mean that the driver has been forced to stop because of dangerously over-inflated tires. There is no need to tell you of the costliness of these too-frequent stops to allow tires to cool off or while the driver "bleeds off" excess pressure.

There is, however, BIG NEWS for you in the fact that now all these stops can be eliminated! Yes, the sensational new Pressure-Stat automatically does away with the over-inflation menace. With Pressure-Stat installed on your truck tires you will keep your trucks rolling steadily throughout the longest haul and add to the life of your tires . . . in addition to greatly increasing the safety factor of your trucking operation.

Pressure-Stat is a precision-built device, scientifically designed and engineered to prevent any air escaping through the valve below a pre-determined pressure and to maintain that pressure at a maximum by automatically releasing any excess.

Pressure-Stat weighs less than an ounce and may be installed on the valve stem of any tire in a few moments without the use of tools. Pressure-Stat is equipped with a conventional replaceable valve core and tires may be inflated without removing the device from the valve stem. In fact, with Pressure-Stat installed it is unnecessary to use a tire gauge to determine when the tire is correctly inflated. It is instantly removable for tire changes.

Pressure-Stat has been thoroughly tested by independent trucking fleets and is sold with a money back guarantee. Write today for detailed information about Pressure-Stat.



MANUFACTURER'S AGENTS - ATTENTION!

Several desirable territory franchises are still available. Correspondence with established manufacturer's agents in the automotive field is invited.

RICHARDSON REGULATOR, INC. 4712 CHENE . DETROIT 7, MICH.

You add water only 1/3 as often...!

HERE'S WHAT MAKES THE DIFFERENCE



Unique new design and construction gives Prest-O-Lite Hi-Level more than 3 times the liquid reserve of ordinary batteries.

Both Batteries Filled



Prest-O-Lite Hi-Level

Ordinary Type

Liquid Level After Equal Evaporation



Prest-O-Lite Hi-Level

Ordinary Type

Illustrations above show the result of equal evaporation in the Prest-O-Lite Hi-Level Battery and other batteries. As shown by illustration on the far right, plates of ordinary batteries are exposed sooner by water less and then become inactive faster.

The new Prest-O-Lite Hi-Level Battery gives you longer life with fewer stops for service than batteries without the features of the Prest-O-Lite Hi-Level.

Avoid battery damage, expense and trouble resulting when liquid loss exposes plates in ordinary batteries. Be sure your next batteries are Prest-O-Lite Hi-Level, the battery that needs water only 1/3 as often as batteries without the Hi-Level features.

Prest-o-life hilevel BATTERY

You add water only 1/3 as often to a Hi-Level Battery. In addition to the revolutionary Hi-Level feature, oversize electrical capacity plus Fiberglas insulation gives longer life than batteries without the Prest-O-Lite Hi-Level features. The longer life delivered by this new Hi-Level Battery helps keep down costs, prevents such things as loss of time and road delays. A test in your fleet will convince you.

PREST-O-LITE BATTERY COMPANY, INC.
INDIANAPOLIS 6, INDIANA

ASK THE MAN BEHIND THE



00



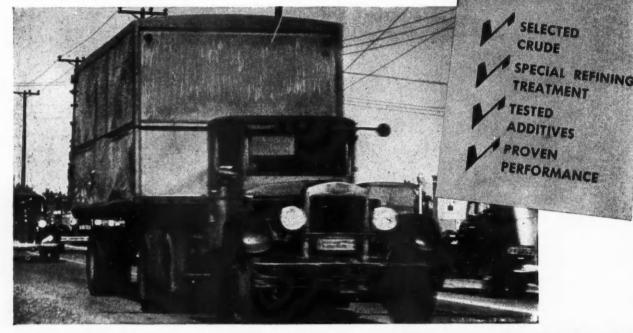
October, 1946

AL

Use postage-paid card inserted at page 59 for free information on advertised products

247

EXTRA QUALITIES-



SINCLAIR OPALINE TBT MOTOR OIL

Made specially for gasoline-powered bus, truck, tractor and construction equipment service...where the pull is hard and steady.

When heavy load imposes extra demands on engines of trucks, buses, tractors and construction equipment, the motor oil must possess extra qualities.

Sinclair OPALINE TBT MOTOR OIL is made with special additives to fortify it against oxidation tendency under high temperatures, discouraging guin, lacquer and carbon deposits. Special detergent qualities help keep engines clean; inhibitors protect against bearing corrosion and foaming.

Try this extra-duty oil for extra-duty service. It's made in grades to suit varied engine designs and operating requirements.

SINCLAIR AUTOMOTIVE OILS

FOR FULL INFORMATION OR LUBRICATION COUNSEL WRITE SINCLAIR REFINING COMPANY, 630 FIFTH AVENUE, NEW YORK 20, N.Y.

·In

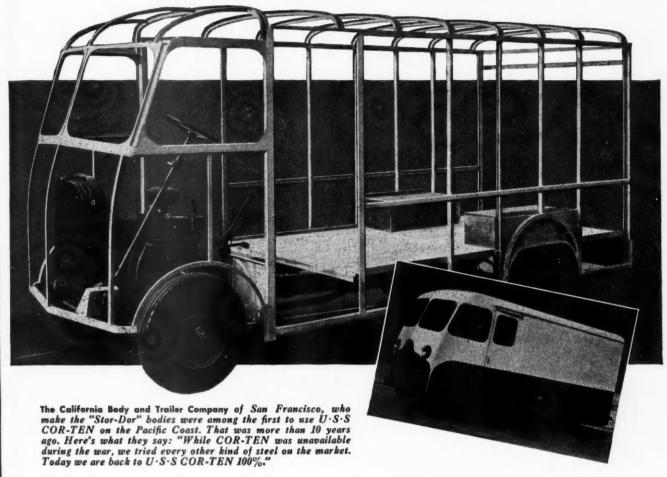
un

men

en

They cut weight almost one-third

BY BUILDING WITH U.S.S COR-TEN



DEADWEIGHT is a costly luxury that users of these "Stor-Dor" truck bodies won't have to pay for. 200 pounds lifted off the frame and understructure lift 200 pounds off motor, brakes and tires on every empty haul . . . make it possible to carry 200 pounds extra payload at no extra cost.

While light in weight, this carefully engineered construction is at the same time unusually rugged. Structural members, developed from easily formed Cor-Ten flat sheets, are electrically welded into a homogeneous unit that has great strength and stamina. For U.S.S Cor-Ten has a yield point 11/2 times that of structural carbon steel-has substantially greater impact strength-has 4 to 6 times greater resistance to atmospheric corrosion-has almost three times the modulus of elasticity of the strongest non-ferrous "light" metal. That's why lightweight Cor-Ten

construction like this has such amazing ability to absorb vibration, road shock and wear . . . costs so little to maintain . . . stays in service longer.

If you want all the facts about this pioneer high strength steel, write for a copy of the new U·S·S COR-TEN catalog. It's just off the press.



S

1;

it

AL

U·S·S HIGH STRENGTH STEELS

AMERICAN STEEL & WIRE COMPANY, Cleveland, Chicago and New York
CARNEGIE-ILLINOIS STEEL CORPORATION, Pittsburgh and Chicago

COLUMBIA STEEL COMPANY, San Francisco
NATIONAL TUBE COMPANY, Pirtsburgh
TENNESSEE COAL, IRON & RAILROAD COMPANY, Birmingham

United States Steel Supply Company, Chicago, Warehouse Distributors

United States Steel Export Company, New York

ITED STATES STEEL



There's ONE THING Men the World Around Agree Upon: "DURO Tools are Doggone Good!"

Wearing a satin finish such as tools of this kind never had before . . . matched and balanced so that they seem to come alive in your hand, as obedient as your fingers . . . precisely built, to do exactly what a skilled man wants done . . . that's what you find in the perfected Duro tools. All Duro resources—advanced plant equipment, widest technical background, world experience, AND THE WILL TO EXCEL—are focused on making Duro's regular output of tools finer than anything pre-war—and Duro tools were "Doggone Good" then, in any man's language! . . . DURO METAL PRODUCTS CO., 2649 No. Kildare Ave., Chicago 39, Illinois

"Doggone Good!"



ALSO MAKERS OF DURO MACHINE TOOLS





Wausau Oil-savrs don't Carbonize

Even after thousands of miles . . . long beyond the usual clogging point of oil rings, Wausau OIL-SAVRS run clean and free . . . "clean as a whistle!" Of course there's a reason, and a reason you'll find in no other ring . . . it's the Wausau OIL-SAVR Safety Center Unit. The most revolutionary design in piston ring history this heat-dissipating,

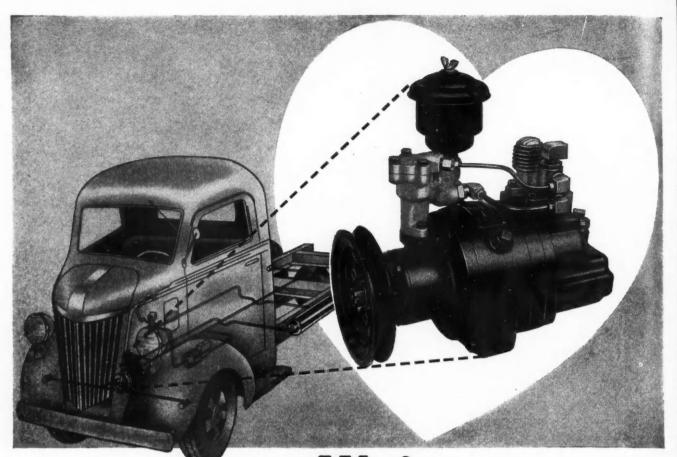
action-alloy center unit keeps carbon moving, adds thousands of extra miles to every OIL-SAVR installation. Seeing is believing . . . try a set of OIL-SAVRS on your next job. Ask your jobber.

WAUSAU MOTOR PARTS CO.





NAL



The Heart of the Wagner Air Brake is the Rotary Compressor

Every part of an air brake system is important-but the most important of all is the compressor-the beart of the air brake system. Not only must it operate unfailingly to assure plenty of air at all times, but it must do so economically. The Wagner Rotary Compressor meets both these requirements.

Only the Wagner rotary compressor has ALL of these features so desirable in automotive air brake systems:

Rotary motion of all moving parts.

In running balance at all times.

Longer belt life due to more uniform torque loading. Low friction losses—therefore high operating efficiency.

A predetermined air pressure range automatically maintained.

Operating parts are lightly stressed, thereby insuring long life and low maintenance cost.

Extremely quiet in operation.

Self-contained oiling system—uncontaminated by engine waste products.

Compact-requires minimum installation space.

Low operating temperature prevents carbon formation in the compressor and delivery lines.

Adaptable to all types of automotive brake systems.

For complete description, write for Bulletin KU-50B and address your request to Wagner Electric Corporation, 6470 Plymouth Ave., St. Louis 14, Mo.

DISTRIBUTORS WANTED!

There are still some areas in which distributorships are available. If interested in distributing Wagner Air Brakes in your trading area, write us for full particulars. Wagner

LOCKHEED HYDRAULIC BRAKE PARTS and FLUID...NoRol...CoMax Brake LINING



Electric

AIR BRAKES...TACHOGRAPHS...INDUSTRIAL BRAKES...ELECTRIC MOTORS...TRANSFORMERS

Wagner's 25 Branches: ATLANTA 3 - BALTIMORE 18 - BOSTON 15 - BUFFALO 8 - CHICAGO 16
CINCINNATI 10 - CLEVELAND 15 - DALLAS 1 - DENVER 3 - DETROIT 2 - INDIANAPOLIS 4
KANSAS CITY 8 - LOS ANGELES 15 - MEMPHIS 3 - MILWAUKEE 2 - MINNEAPOLIS 4 - NEW
YORK 23 - OMAHA 2 - PHILADELPHIA 40 - PITTSBURGH 13 - PORTLAND 9 - ST. LOUIS 3
SAN FRANCISCO 3 - SEATTLE 4 - TORONTO 2

Ti ma

ing

Fo

me

rai

tra

Fo

the

yo

Fo

lat

sig Th

sel

be



Here's the Endurance Record

Koylon Foam Cushioning still going strong after 11 years' continuous service on major U. S. Carriers!

THERE'S matchless economy that's on a par with the matchless comfort of Koylon Foam for seat cushioning and mattresses!

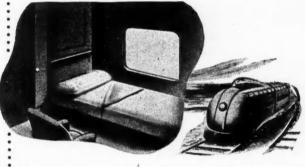
This unique combination of qualities in Koylon Foam makes it of equally vital interest to management and designer alike. Bus or truck, streamlined railroad coach or airliner... when Koylon Foam cushioning is specified, it's as good as writing a contract that maintenance costs will drop 'way down. For in test after test, Koylon Foam has lengthened the life of fabric coverings!

And for passenger comfort...you'd have to ride your customers on billowy clouds to beat Koylon Foam! For it combines the natural resilience of pure latex with the buoyancy of air!

In cushion materials...it's as modern as the latest de-

signs on your drafting board. That's why we say: If you sell "seats"—or "sleep" better specify Koylon Foam!







"U. S." KOYLON FOAM DIVISION . MISHAWAKA, INDIANA

UNITED STATES RUBBER COMPANY

Остовек, 1946

Use postage-paid card inserted at page 59 for free information on advertised products

ShortLineSystem HUDSON TRANSIT LINES MAHWAH, N. J.

FOR ALL OCCASIONS HIRE

uxe Products Corporation

tlemen:

writing you this letter are obtaining through the years ago, your districtive called here and explained in clean lubrication.

d to either "call the bluff" or produce.
DeLuxe Oil Filters, and the results are
ed for. RESULTS: Our equipment can be
clean lubrication cut more than we
e; oil consumption greatly reduced;
startion obtained through the use
l gladly take time out to answer

o your using this letter in any se to someone else.

Sincerely,

Homer Brunning

lomer Bruning
UPERINTENDENT OF MAINTENANCE

"...DeLuxe story seemed beyond what could be expected...decided to "call the bluff"...RESULTS: Our equipment now 100% DeLuxe-Equipped ...motor maintenance cut...oil consumption greatly reduced... motors giving better performance... Should bus operators write, I will gladly answer."

(Signed) Homer Bruning, Superintendent of Maintenance, Hudson Transit Lines, Mahwah, N. J.

Hudson Transit CALLS OUR "BLUFF"

Old ideas die hard. It's difficult for many fleet operators to appreciate what really CLEAN oil can mean in engine performance, because THEY NEVER HAD CLEAN OIL, and they can think of it only in terms of partly-cleaned oil—which is as different as the difference between fresh-from-the-cow (infected) milk, and pasteurized milk. Like many another, Mr. Bruning, here, couldn't believe the DeLuxe "claims"; he decided to "call our bluff". He's a hundred-per cent-er now, like anybody who gives DeLuxe a trial. Isn't it about time YOU "called our bluff"? WHAT'S STOPPING YOU? . . . DELUXE PRODUCTS CORP., 1406 Lake Street, La Porte, Indiana.

All 15 Winners Were DeLuxe-Equipped

It is no accident that in the last Nat'l Bus Transp. Awards for Maintenance Efficiency, ALL 15 of the 15 winners were DeLuxe-Equipped...BIG THINGS are happening in lubrication! WRITE! Get FREE DeLuxe booklet.



DELUXE FILTER

*Trade Mark Reg. U. S. Pat. Off.

COMMERCIAL CAR JOURNAL

It's

nd f

hold i

load o

depen

HY

unit .

ect i

ncrea

moot

rake

s in

HY

ands

epen quip asier

est di

ROA

2316 or C



It's a great feeling . . . to climb into the driver's seat and feel out those HYDRO*MASTER controls. They take hold instantly—firm, sure, but smooth as silk—whether full had or empty truck. You know you've got the latest, most dependable brake controls. You know you can stop.

HYDRO*MASTER is a complete hydraulic vacuum brake mit . . . Simply cut it into the hydraulic brake line—connect it with your engine vacuum—and you have up to 500% increase in braking power—fast, sure, fully equalized, soft-mooth. Touch the pedal or lever and there's instantaneous trake response—complete brake control—with the same ease in driving a fine automobile.

HYDRO*MASTERS are already in operation on thouands of trucking units, giving their owners and drivers comlete control, maximum service, economy, stamina, and ependability. If your trucks are not HYDRO*MASTERquipped, you can cut hazards, save money and make driving asier by having them installed. For Safety-sake, do it now.

Write or wire for specifications, prices and name of nearest distributor—TODAY. HYDRO*MASTERS are a triumph of war and postwar engineering . . light, compact, streamlined, efficient units, not affected by road shocks or vibration—requiring no adjustment or lubrication. Equipped with stationary hydraulic cylinder seals made to the highest aircraft specifications, with reciprocating piston shaft . . . built-in air cleaner . . . and universal 3-position mounting brackets.

There's a complete, long-established line of Roadmaster vacuum brake controls . . . power chambers, valves, tanks, fittings—also kits ready-assembled at special kit prices for most installations. Immediate deliveries.

Rich Territories Available for Distributors and Brake Service Men

Dealers—get the full story of profits and satisfaction you can earn by selling and installing HYDRO*MASTERS and the complete Roadmaster line. Write today.

ROADMASTER PRODUCTS COMPANY

2316 S. Flower Street • Los Angeles 7, California or Center and Chestnut Streets • Valparaiso, Indiana



MORE LOADS IN LESS TIME

with streamlined windshields, larger windows

UNOBSTRUCTED see-ability — through wider, streamlined windshields and larger, clearer windows—means less eyestrain, less road-fag for your drivers.

Trucks keep rolling on schedule, with less delays and mishaps, with fewer rest stops. And that means more tonnage delivered at terminals, more money-mileage for your fleet.

That is why so many fleet owners are using Pittsburgh Safety Glass for replacements of windshields and side windows, why so many manufacturers are using it in new truck and tractor cabs.

"Pittsburgh" has pioneered many improvements in safety glass, including mass production of curved—as well as flat—panels for cab windshields and windows. All Pittsburgh Safety Glasses can be readily identified by the familiar "Pittsburgh" trade-mark. The symbol of highest quality in Safety Glass, it is backed by years of experience, maintained by unequalled research and manufacturing facilities, by the most modern equipment and methods.

Whether you need Safety Glass for replacements or for new vehicles, for windshields or for windows, your best bet is your near-by "Pittsburgh" branch or dealer. Pittsburgh Plate Glass Company, 2410-6 Grant Building, Pittsburgh 19, Pa.

Safety Glass BY "PITTSBURGH"

DUPLATE SAFETY PLATE GLASS . DUOLITE SAFETY WINDOW GLASS



PITTSBURGH PLATE GLASS COMPANY

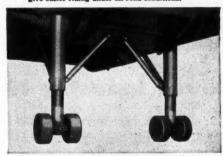


DWARDS TRAILERS are famous for their long life... durability and low maintenance costs. This reputation stems from Edwards many years' experience in building trailers... the sound engineering principles incorporated in the design of every Edwards Model . . . the tested materials and skilled workmanship that go into every unit.

When you order your new units—order Edwards. They pay for themselves in a hurry, for every load is a profitable load. Write for literature illustrating the many models and outstanding features.



BRAKES - RADIUS RODS - SPRINGS Powerful sure-stop, mountain type brakes. Adjustable radius rods. Trouble-free slip-type springs give easier riding under all road conditions.



DUAL WHEEL LANDING GEAR New vertical type Extra strong, easily operated, and rigidly braced. Worm and gears enclosed for protection. Dual wheels on each leg give firmer support.

EDWARDS SEMI-TRAILERS

EDWARDS IRON WORKS, INC., SOUTH BEND, INDIANA

RNAL



Wherever Industry Needs A LIFT

The inbuilt rapid reverse mechanism, designed by Gar Wood engineers, is the greatest development in truck winches in the last 20 years.

This exclusive reversing mechanism provides complete and instant winch action—hoisting, holding, or paying out is done under full load without declutching the engine or power take-off. The single lever control may be mounted in the cab, on the winch or at the rear.

Three point flexible mounting prevents distorted shafts or cramped drums. Oversize shaft is carried on spherical, self-aligning bearing . . . Worm shaft is ground to exact size and polished . . . Gear teeth are hardened and shaved. The drive is by heavy duty power take-offs, either single or two forward speeds. Gar Wood traditional high quality is maintained throughout, and long life and trouble-free operation are assured.



GAR WOOD INDUSTRIES, INC.

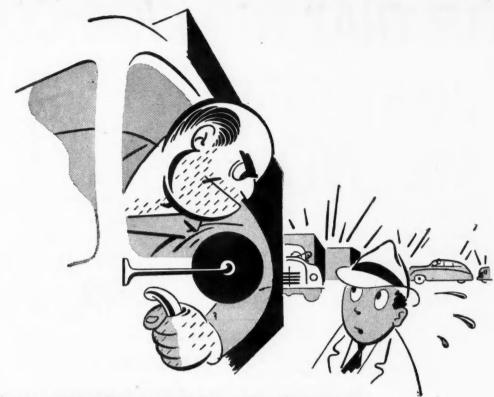
WINCH AND CRANE DIVISION DETROIT 11, MICHIGAN WORLD'S LARGEST MANUFACTURERS OF TRUCK AND TRAILER EQUIPMENT



a r

mi

ba



YOU WANNA START SOMETHING?

... GET A G-E FAST CHARGER



Quick, reliable starting of trucks and busses can be assured when fleet operators keep batteries charged the G-E way.

For the G-E Fast Charger will indicate in less than half a minute whether the battery will take a charge, and in thirty minutes it will substantially charge a normal run-down 6-volt battery without removal from the truck. After this period the initial high-charging rate automatically tapers to a safe 15-20 amp finishing rate. Thus — you safeguard against battery damage and cut power cost, as well.

So - if you want to start something quickly, surely, and

... economically — write for further information on the G-E Fast Chargers and Full-wave Tungar* Chargers. Send inquiry to Section A38-1074, Appliance and Merchandise Department, General Electric Company, Bridgeport 2, Connecticut.

For large capacity charging — the heavy-duty, wall-type G-E Tungar is built to handle up to 24 six-volt batteries at 2 to 6 amp, or up to 12 batteries at 12-amp rate. They're flexible, easy-to-use, economical to operate.



*Trade mark Reg. U. S. Pat. Off.

GENERAL



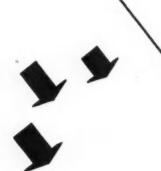
ELECTRIC

Остовек, 1946

Mecha

Use postage-paid card inserted at page 59 for free information on advertised products

"IF THAT TOP KICK COULD JUST SEE ME NOW!"



VETERANS! WHY NOT RUN YOUR OWN BUSINESS?

You can cash in on what you learned in the army about welding. Thousands of 200, 300 and 400 Ampere AC and DC Arc Welding units are surplus and available to you on veteran priority. There are large quantities of Hobarts and Lincolns, quite a few Westinghouse and fair amounts of other makes for sale now. Most of the equipment is used and in good operating condition. Best of all, it is being sold at prices you can afford in setting up your own repair shops or for contract work. Write, wire or phone the nearest War Assets Administration Regional Office below or come in and ask for the special veterans' service section.

FREE INFORMATION

For full information clip and mail this coupon to War Assets Administration:
Please send me complete information on the availability, condition and location of the following types of equipment:

☐ Hobart Arc Welders
☐ Lincoln Arc Welders

-114

- Arc Welding Equipment: Electric Motor Driven: Transformer Type:
- ☐ Westinghouse Arc Welders
 ☐ Electrodes and Welding Rods
 AC...DC...
- Volts Phase Cycles Volts Phase Cycles



Hobart — Standard models of this make available in large quantities and most ratings.

EXPORTERS: Most surplus property is available to the export market. Merchandise in short supply is withheld from export, and if such items appear in this advertisement they will be so identified by an asterisk.



Lincoln—In all models and most ratings. Hundreds in the popular 300-400 Ampere size.

All arc welders are subject to priority regulations. VETERANS OF WORLD WAR II are invited to be certified at the War Assets Administration Certifying Office serving their area, and then to purchase the material offered herein.

WAR ASSETS ADMINISTRATION

Offices located at: Atlanta · Birmingham Boston · Charlotte · Chicago · Cincinnati Cleveland · Dallas · Denver · Detroit · Fort Worth · Helena · Houston · Jacksonville

Worth • Helena • Houston • Jacksonville Kansas City, Mo. • Little Rock • Los Angeles GOVERNMENT OWNED SURPLUS Louisville • Minneapolis • Nashville • New Orleans • New York • Oklahoma City Omaha • Philadelphia • Portland, Ore. Richmond • St. Louis • Salt Lake City • San

Antonio · San Francisco · Seattle · Spokane



The life of a Mohawk Tire is not over when the tread wears down the first time. Like the foundation of a good road or the uppers of well built shoes, its carcass has been made purposely strong to handle several recappings. That's why the complete life of a Mohawk Tire provides maximum economy.

THE MOHAWK RUBBER CO. AKRON 5, OHIO



MOHAWKS GO FARTHER

Ots Here!

The New Super Capacity

HYPRESSURE

INSTANTANEOUS STEAM CLEANER

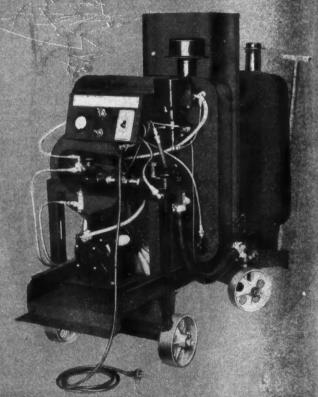
- * IMPROVED
- * STREAMLINED
- * MORE POWERFUL
- * MORE EFFICIENT
- * FULL-VIEW CONTROL PANEL
- * AVAILABLE WITH OR WITHOUT MACHINERY COVER

It Cleans Instantly, Thoroughly, Economically

- Mill and Industrial Machinery and Equipment
- Truck, Bus and Passenger Car Motors and Chassis
- Production and Farm Machinery
- Floors, Walls, Windows, Skylights
- Building Exteriors, etc.
- ... 8 to 10 times faster than handcleaning methods.

Cleaning is accomplished by a highly atomized mixture of steam, hot water and cleaning compound applied under pressure through a spray nozzle.

HYPRESSURE JENNY is a sturdy, compact, portable unit easily moved from one cleaning job to another. Oil-fired or gas-fired types are optional; and the only requirements for operation are an electric current outlet and a hose connection to water supply. It will pay you to get complete facts about this new super-capacity steam cleaner. Write for new specification circular for Model JO Hypressure Jenny, just off the press. There is no obligation.

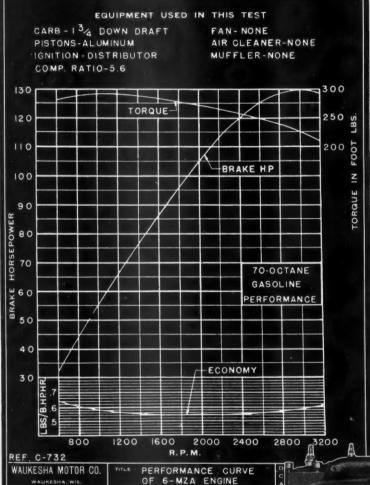


Hypressure Jenny Division

HOMESTEAD VALVE MANUFACTURING CO

P. O. Box 90 · Corgopolis, Pa.

Another WAUKESHA HIGH OUTPUT ENGINE

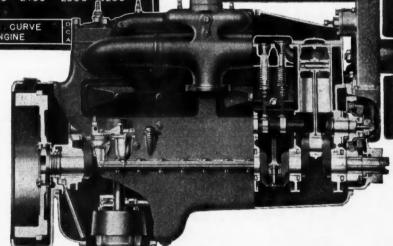


...New Model
6-MZA
130 Horsepower
for Heavy Duty

● This engine model is marked by its streamlined compactness...plentifully packed with power, for every type of heavy-duty power machinery, yet speedier and smoother running... designed for use with modern 70 or 75 octane gasoline. It features all the proved practical developments of Waukesha wartime research—every feature performance-proved!

Get Bulletin 1126 for detailed description and specifications. Consult the Waukesha engineering development staff about your special problems and engine needs. There are sizes and types for every heavy duty need—8 hp. to 400 hp.

Six cylinders, 4¼ in. bore x 4¾ in. stroke, 404 cu. in. displacement . . . drop forged, heat treated 7-bearing crankshaft . . . hardened alloy valve seats . . . aluminum pistons . . . controlled turbulence combustion chamber high duty precision bearings built-in centrifugal governor and full pressure oiling system.



WAUKESHA MOTOR COMPANY, WAUKESHA, WISCONSIN . NEW YORK . TULSA . LOS ANGELES

WAUKESHA ENGINES







UNITS AVAILABLE GRICO 2-AXLE DRIVE 19842 W. Eight Mile Rd. Detroit 19, Michigan



N. Y. Truck Strike Paralyzes City

A brief review of the New York City trucking strike reemphasizes the far-reaching effects of a trucking paralysis on a major city. As we go to press, somewhere between 25 and 40 per cent (depending on whether you accept the employer or union estimate) of the trucks were rolling again. But the unhappy compromise that got the drivers back—a 31-cent-an-hour pay increase—is, to say the least, a severe blow to the existing economic structure.

The strike got under way on Sept. 3, the day after Labor Day, when Local 807 of the International Brotherhood of Teamsters, AFL, walked out with a demand for a 30 per cent pay increase. Employers were prepared to pay only 6½ cents. Within two days 15,000 members of Local 807 and two affiliates, Local 282 and 816, were out. In addition 10,000 members of driver locals in nearby New Jersey counties walked out in sympathy.

As the strike began, New York's Mayor William O'Dwyer suggested the magic formula of an 18½ cent-an-hour pay increase as a compromise move. This was immediately rejected by employer spokesmen as far too high, and on the following Sunday was booed down by strikers as ridiculously low, this latter despite the union leaders' recommendation that it be accepted.

Thus the crippling effects of the strike took hold. By the third day, movement of emergency shipments such as fuel oil, food and medicine was being hampered by roving pickets, despite express provisions that such shipments be guaranteed. Movement of incoming freight was being stopped at the Holland tunnel and at other arteries. Even through shipments of motor freight from New England to the South was being slowed to a dwindle by sympathizing pickets in New Jersey. One picket there was wounded by gun fire from a driver, the only bloodshed to date.

As the rift became wider between the employers' terms and the Mayor's 18½-cent proposal, which also included a reduction from 44 to 40 hours and more liberal vacation allowances, the effects on the city's

(TURN TO PAGE 266, PLEASE)

Classified Advertisement

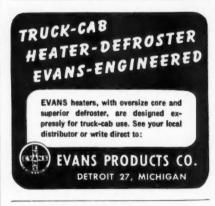
WANTED: International Type R-5 Double Fare Registers Complete with Backs. Write Box 7, c/o Commercial Car Journal.

WANTED: MAN FOR SUPERVISORY FIELD SERVICE WORK ON PRIVATE DELIVERY FLEETS EAST OF MISSIS-SIPPI, MUST BE WILLING TO TRAVEL, COMPETENT MECHANIC AND FAMILIAR WITH OPERATING PRACTICES AND RECORDS. GIVE COMPLETE RESUME OF EDUCATION AND EXPERIENCE, SALARY DESIRED, RECENT PHOTO IN FIRST LETTER. BOX 8, C/O COMMERCIAL CAR JOURNAL.









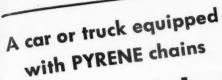
A PLAN TO SAVE YOU TIME AND MONEY

More than 140,000 units in more than 1,400 fleets allover America have benefited from Perfect Circle's Fleet Survey Plan! For full information, write today to

Fleet Survey Dept.

The Perfect Circle Company

Hagerstown, Indiana



Stops quicker

gives you and your property

Longer Life!

IT'S NOT FAR NOW-JUST TEN MORE MILES OF THIS SNOW AND ICE.



DRIVING WITHOUT CHAINS



HE'S SKIDDING RIGHT AT US!



WHAT A MESS! IF WE HADN'T HAD CHAINS, WE'D BE RIGHT IN THAT PILE.

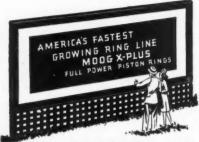
Safe drivers always carry Pyrene Chains; they bite into slick, icy, snowy, mucky or mired roads, grip the surface, assure traction and reduce skidding. The Pyrene chain lock gives a tighter fit and faster "put on" and "take off"-it won't come open in service. Specify Pyrene Doubleduty Bar-Reinforced Chains. They give more than double the wear for a slight increase in cost.

Be sure to use Pyrene Cross Chains in repairing old sets-they are uniformly case hardened for extra wear. See your Pyrene jobber about Pyrene Chains; ask him for the free, informative Safety Sam Chart.



Safety Sam: I keep telling you. Get Pyrene Chains and you'll have better control of your vehicle





MOOG INDUSTRIES, INC. ST. LOUIS, MO.

DIRECT-FIRED HEATERS by

GARAGES TERMINALS WAREHOUSES

HEATER DEPT. DRAVO CORP. PITTSBURGH 22. PA.



VELVE DUCK
BIMETALLIG FRICTION MATERIAL
GOT
CLUTCHES AND BRAKES

THE S. K. WELLMAN CO.



ALLEGANY OIL CO. 6130 S. La Salle St.

N. Y. TRUCK STRIKE

(CONTINUED FROM PAGE 264)

industry were wide spread. By Sept. 7 printing and garment trades were paralyzed. Flow of newsprint to the daily papers was so restricted that nearly all of the city's dailies eliminated advertising by Sept. 10. Food was becoming increasingly scarce. Cigarettes, tooth paste, soap and a thousand and one daily necessities were disappearing. Flow of building materials, even for high priority housing was at a standstill. The milk supply was cut five per cent due to a shortage of paper containers; showed prospects of even further reduction. At the end of the second week, the two biggest food store chains, Atlantic & Pacific and Safeway, were forced to close their doors.

Union officials were now aggressively urging acceptance of Mayor O'Dyer's formula. Circulars to that effect were distributed in wholesale numbers. But at the same time circulars, closely identified with communists interests, urged defeat of these terms. The vote of the rank and file, as previously mentioned, was a resounding "no."

On Sept. 12 Mayor O'Dyer lashed out against Daniel J. Tobin, president of the International Brotherhood of Teamsters, AFL, charging him with being unable to control his members. The lashing bore fruit. Next day the 10,000 sympathizing New Jersey drivers went back to work on orders from their top boss that they must adhere to existing contracts. This eased the tension somewhat.

The same day, Local 807 agreed for the first time to enter joint negotiations with Locals 282 and 816. Things were looking a little brighter, but on Sept. 14 the situation was further complicated by a wildcat strike of 1000 United Parcel Service drivers over a dispute in pay for the periods of idleness brought about as a direct result of the strike.

By this time some employers signified their willingness to enter separate agreements with the union and on Sept. 17, in a surprise move, the union voted overwhelmingly to accept the separate contracts, thus breaking the united front of the employers. The result was an immediate return to work of some 3000 drivers with another 2000 following within a matter of days. But the terms were 31 cents an hour more, plus reduction to a 40-hour week, plus liberal provisions for overtime, plus increased vacation periods!

These were terms that the majority of employers, grouped under the banners of the Motor Carriers Association and the State Motor Truck Association, said were impossible. On the same day that some employer members were breaking rank to file separate agreements, the association spokesman, Joseph M. Adelizzi, who was also chairman of the Operator's Joint Wage Scale Committee, served notice that suit would be filed against Local 807 for \$10,000,000 on the basis that the union had



Write for catalog 38AC and 38BC with discount in much exact.

CARL H. FRINK, Mfs., CLAYTON, 1000 184, N. Y.

DAVENPORT-BESLER CORP., DAVENPORT, IOWA
FRINK SNO-PLOWS OF CAN. Ltd., TORONTO, ONT







Preferred by thousands of discriminating skilled mechanics in many of the world's largest industrial plants.

In design, temper and finish OLDFORGE TOOLS are all that the term "Quality" implies.

Contact your supplier or write us direct.

Their modest cost will interest you.

QUALITY TO`LS C^RP. New Wilmington, Pa. New York Office: 11 Warren St. • Phone Worth 3640



Sure I know a bargain, but you don't have to be Scatch to see the ocenomy of fleet marking and advertising with EXCELLO Decals. Stock numbers and license data available. Quick delivery. Write today.

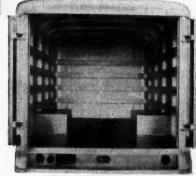
EXCELLO SPECIALTY COMPANY

Осто



Now . . . Bigger Payloads with an

E-B-CO "ARMORLITE" VAN PANEL



IN SIZES FOR ALL TRUCK CHASSIS

E. B. Co Armorlite truck bodies are-made in four models (with tail gate or full double doors) to fit all truck chassis sizes and insure proper weight distribution.

MODERN...LIGHTWEIGHT...SECTIONAL CONSTRUCTION

Here's a new name in the truck body field— E. B. Co Armorlite—with a new van panel model that offers you ten unique features—ten amazing advancements that add up to bigger payloads, lower maintenance costs, and more profitable operation.

Ten Great New Features:

- REVOLUTIONARY LIGHT WEIGHT...¾ to 1½ tons lighter than conventional type bodies.
- SUPERIOR STRENGTH . . . Aluminum bonded to Tekwood. Magnesium frames. Steel floors.
- INTERCHANGEABILITY . . . Sectional panels readily replaced in case of accidents.
- 4. PRECISION MASS PRODUCTION ... Uniform strength and quality. Outstanding value.

- LARGE INTERIORS . . . Full 88" clear inside width, 78" height. Large rear door opening.
- SECTIONAL CONSTRUCTION . . . Can be knocked down for space-saving shipments by rail or water.
- LOW LOADING HEIGHT . . . Floor level only 3" above chassis in wheelhouse models.
- 8. MODERN STREAMLINING . . . Aerodynamic lines. Less wind resistance. Fine appearance.
- ALL METAL ROOF . . . Aluminum exterior bonded to Tekwood and cross-trussed with magnesium girders.
- HEAVY-DUTY REAR BUMPER...Integral with combination rear step and license plate holder.

Specifications subject to change without notice.



Manufactured by world's largest builder of submarines.

Available through truck body distributors everywhere.

Write for literature and prices today.

Commercial Body Division, ELECTRIC BOAT COMPANY, Groton, Conn.

NAL



MONKEY LINKS

Fit all types of Tire Chains. Made in 5 sizes. Order them today.

FLOWER GITY SPECIALTY CO.

Rochester, N. Y.

le Mark Reg. U. S. Pat. Offic

Trucks

HEAVY DUTY FOR OFF THE HIGHWAY SERVICE

— Specially Designed for —
Coal Mining—Iron Ore Mining—Coppe
Mining—Pit and Quarry—Logging—Ols
Fields—Etc.
It Casts No More for Trucks Specially
Built to Fit Your Needs. Have Our Engineers Visit and Analyze Your Operation.

DART TRUCK COMPANY KANSAS CITY, MO.



NEW LOW COST DRILL GRINDER

Anyone can do expert drill grinding with this simple-to-use drill grinding attachment—nts on any bench grinder—saves buying new twist drills—saves time and materials that dull bits waste. Grinde hits from 3/16 to 1%.



N. Y. TRUCK STRIKE

(CONTINUED FROM PAGE 266)

violated the Smith-Connally Act by failing to give 30-day's notice of strike.

The answer from the Local's president, John E. Strong, was illuminating. He stated that the tie-up was not technically a strike but a lockout since the men had no new contract under which to work. With regard to the terms of the suit he said, "I never felt so important in my life. I wish my poor old mother, God rest her, was alive to know that her son was sued for \$10,000,000."

While the disputes continued individual employers continued to sign up. How many actually signed up remained in hot dispute as we go to press. Mr. Strong, on the one hand, claimed 41 per cent, Mr. Adelizzi, on the other, claimed only 25. And paid advertisements from the employer group were beginning to appear in New York dailies.

RUBBER FOR SMALL TRUCK TUBES

Most of the smaller sizes of truck tire tubes have been added to the types which may be made only from natural rubber, in order to channel the short supply of butyl, the synthetic rubber with high airretaining qualities, into the production of passenger car tire tubes, according to W. J. Sears, Director of the Civilian Production Administration's Rubber Division.

At the time permission has been granted to make certain special types of truck tires such as "store door delivery" and "stop-start" types heretofore prohibited. These will be allowed the same percentage of natural rubber that has been permitted in other types of tires of the same size.

Hereafter the use of natural rubber is mandatory in the manufacture of all truck tire tubes having a cross section of 7:00 in. and up. Previously the use of butyl was required in the manufacture of truck tire tubes with a cross section of less than 8:25 in. Passenger car tire tubes still may not be made of natural rubber.

Mr. Sears explained that sufficient natural rubber is available for this increased use because the rubber manufacturing industry during July fell short of consuming authorized quantities.

All types of tires for trucks, having a cross-section of 8:25 in. and up, may now be manufactured with 94 per cent natural rubber. Previously the types of tires which could be made with this percentage of rubber were specified in the order.

31.739 JEEPS BUILT FIRST HALF

Civilian Jeeps comprised 17 per cent of the total commercial vehicles, 10,000 lb. or less gross vehicle weight, produced through June 30 of this year. From Jan. 1, 1946, 186,591 vehicles of all makes were produced. Willys-Overland manufactured 31,739 Jeeps during that period.

(TURN TO PAGE 270, PLEASE)



ZEHR-COLLAPSIBLE TRUCK BACKS



Safe . . . easy and simple to handle. Zehr Truck Backs are all - welded steel designed for great strength and long continuous service.

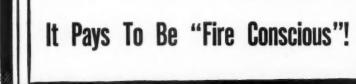
They are theft. proof, rust-proof and flexible.

Write for details and prices.

ZEHR PRODUCTS COMPANY 2180 East Hazzard Street, Philadelphia 25, Pa.







AMERICAN SAFETY TANK CO. KANSAS CITY, MO.

THE RESIDENCE OF THE PROPERTY OF THE PROPERTY

Oct

What washing your hands can show you about THIS





Notice how hard it is to get off dirt and grease if you try to wash your hands in water alone.

But add a little soap—and the soapy water lifts dirt right from your skin—keeps it suspended—carries it away when the washbowl is drained.

That's just what Gulf Dieselube H.D. does for heavy-duty gasoline and Diesel engines.

For Gulf scientists have provided in Dieselube an oil that holds soot, dirt, varnish, and sludge-forming materials in suspension. You can remove them from your engine by draining at regular oil-change periods.

If you'd like to know how else Gulf Dieselube H.D. can improve your fleet's operation, write the Gulf Oil Corporation, Gulf Building, Pittsburgh 30, Pa.—and a Gulf Service Engineer will call, free of charge.

8 WAYS

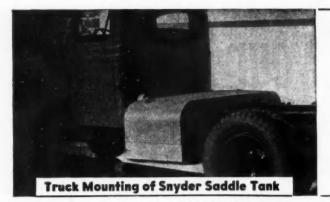
Gulf Dieselube H.D. Can Help You Cut Down On Operating Costs

- 1. Minimizes cylinder wear.
- 2. Prevents corrosion of alloy bearings by oil.
- 3. Reduces ring sticking lengthens time between overhauls.
- 4. Reduces oil screen plugging.
- 5. Improves compression.
- 6. Minimizes varnish.
- 7. Does not "foam."
- 8. Reduces carbon deposits which often scratch piston and cylinder walls.



Dieselube H.D.

For Heavy-Duty Gasoline and Diesel Engines



SNYDER SAFETY TANKS

Most Popular Safety Equipment In The Trucking Industry Some Reasons Why!

- 1. 100% apwelded construction.
 2. Uniform strength throughout.
 3. Equipped with Flame Guard Safety Valve. (Trade Mark No. 409422.)
 4. New Fusible Filler Caps.
 5. Slip Proof Deck Plate.

Designed to fold with a crash.
 Approved by the Underwriters Laboratories, inc.

Patent Numbers 2181772 - 2273737 - 2389168. Others pending. Also foreign

patents. When You Buy a Tank Buy "Snyder." For Catalog and Address of Your Nearest Distributor, Write:

SNYDER TANK CORPORATION

P. O. 6ox 14, Buffale 5, N. Y.
SNYDER TANK CORPORATION P. O. Box 2390, Birmingham, Ala.

DONT

GRAY ALLOY

METAL FOR CRACKED BLOCKS & CYL. HEADS. FILL SCORES LOW SPOTS OTHER USES

PROVEN DURABILITY ON GAS, DIESEL, BUS, TRUCK & MARINE ENGINES

Money Back Guarantee

SAVE LABOR REPAIR IN CHASSIS

Flux and Instructions and 10 oz. Metal Postpaid Ten Dollars Trial Size 4 oz. Five Dollars

GRAY ALLOY METALS COMPANY BOX 542 SAN FRANCISCO, CAL.

Lead Shortage Threatens Automobile Production

The lead situation stands out today and is currently the most critical in automobile production because the available supply has dwindled to a dangerous degree. Without lead, cars and trucks cannot be made and the business of many hundreds of firms making up the whole of automotive production, and employing over 500,000 people, is threatened with chaotic curtailment and widespread unemployment.

President George W. Mason of the Automobile Manufacturers Association wired John R. Steelman, Director of the Office of War Mobilization and Reconversion, on Aug. 28 that the automobile industry faced radical curtailment or total stoppage of production within a matter of weeks due to the acute shortage that has developed in the supply of lead.

In a letter which followed, he said the industry believes that Mr. Steelman's office should take emergency measures to remedy the situation since it is apparent that it stems basically from the way in which the several government controls over lead, operated by different agencies, are keeping off the market a supply potentially adequate for essential uses. The full effect has come coincidentally with restoration of OPA controls on top of a limitation on imports.

President Mason reaffirmed the conviction of the industry that an automobile shutdown in the present circumstances would be wholly attributable to government inaction in a situation which is primarily of government making, and concerning which the several responsible agencies have been informed fully.

He expressed the belief that the ceiling on lead is being held well below the world market on the theory that the cost of living will thus be held down. Lead, however, is not sold to the ultimate consumer as lead but as a part of a manufactured product. In the case of motor vehicles, if the supply is artificially limited, production will slow down or cease as costs go up and prices of one of the major elements in the cost of living will have to go up also. The result could be exactly opposite to that intended.

Mr. Mason, in his letter, went on to explain the lead situation in further detail as follows:

(TURN TO PAGE 272, PLEASE)

N F W ! BLOWOUT-PROOF RUBBER RIVETS SPEAKER Rubber Rivets seal nail holes and small breaks. A quick pull on the wire quick puil on the wire needle makes a repair that outlasts the tire. Prevent fabric rot and blowouts with Rubber Rivets. Get some from your jobber today.

J. W. SPEAKER CORP. Milwaukee 12, Wis.



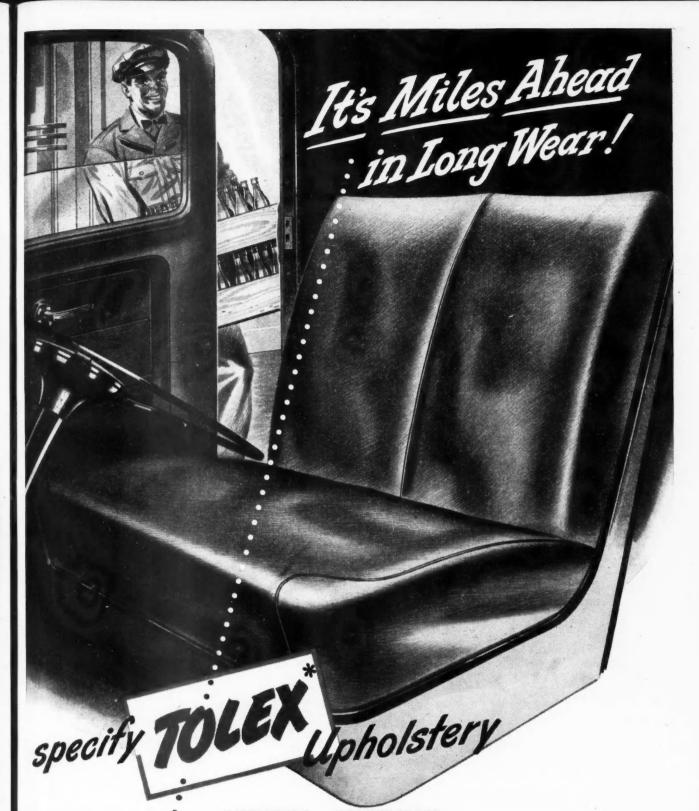
TRUCK DECALS PALM BROTHERS

require no pencil varnishing WRITE FOR OUR CATALOG

The PALM BROTHERS DECALCOMANIA CO. Cincinnati 12, Ohio, U.S. A.



ARROW SAFETY DEVICE CO. MOUNT HOLLY, N. J.



SUPER-TOUGH . . . WEATHER-PROOF
EASY TO CLEAN
STAIN-PROOF . . . CAN BE FLAME-PROOFED
DURABLE . . . EYE-APPEALING
BROAD RANGE OF COLORS AND EFFECTS

*A registered trade name identifying Textileather's plastic leathercloth. Specify Tolex upholstery for new equipment and replacement.

Write for samples and more details. Textileather Corporation, Toledo, Ohio.

Остовек, 1946

Use postage-paid card inserted at page 59 for free information on advertised products





NATIONAL SALES ORGANIZATION SEEKS ADDITIONAL ITEMS FOR TRUCK AND TRAILER MARKET

Our Client, a national sales organization, has ample facilities and capital for the development, sales promotion and manufacture of an item (or idea) of merit for the Truck and Trailer field. Your correspondence is invited and will be treated in the strictest confidence. Address: Campbell & Reynolds, 43 E. Ohio St., Chicago 11, Illinois.

For long life and economical operation ask for HEIL BODIES AND HOISTS
Write for bulletins
THE HEIL CO.
Milwaukee 1, Wisconsin

LEAD SHORTAGE

(CONTINUED FROM PAGE 270)

"As a hangover from war conditions, Government purchases of metals abroad, we are informed, are based upon informal agreements and understandings with foreign nations. Because no explanation of these agreements and understandings affecting foreign distribution has been made, it has been impossible to learn what may have dictated a reduction of buying at this critical juncture.

"It seems to us utterly inconceivable, however, that a deliberate policy of restricting imports would have been adopted without consulting and informing the American public, when a result of such a policy would be to cut off the jobs of possibly half a million U. S. workers in just one of the lead-using industries. So there must be some other cause not apparent to us. Certainly there is lead to be had abroad and it would appear on the American market if private enterprise were permitted to make the purchases.

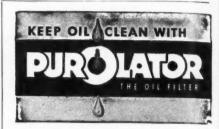
"We believe it worthy of note, as substantiating what we have said above, that during the period in which OPA controls were non-existent, a domestic price for lead was established at 9.5 cents per pound. The Metals Reserve Corporation sold its foreign purchases to domestic smelters at that price. Very large quantities of secondary or scrap lead immediately came on the market. In fact, the flow from scrap dealers assumed record-breaking proportions.

"It is not our function to judge whether this withholding of lead from the market is, or is not, proper and legitimate, nor whether the Government should carry out the intention expressed in the OPA announcement of Aug. 29 of holding the reestablished lead price at 8.25 cents per pound and attempting to wear down the holders of this supply in an endurance

"The point that must not be lost from sight is that the unfortunate pawns in this kind of game are the automotive factory workers who face loss of jobs and the very large number of persons who have been waiting for months for cars and trucks which they need for essential purposes, and who now face further extension of delay before their turns to receive delivery can be reached."

Mr. Steelman, in his reply, said neither the Price Administrator nor he believed that with a premium price plan in effect, an increase in the domestic ceiling price of lead would significantly increase production. He has issued a directive which will modify the premium price plan to increase the incentives for mining of lead ore.

He stated he and the Price Administrator are agreed that an increase in the price of scrap lead is not necessary to maintain the flow of scrap to secondary refiners. "I strongly support this decision of the Price Administrator" (that there will be no increase in the price of scrap lead in the foreseeable future).



PUROLATOR PRODUCTS, INC.

Founder and leader of the oil filter industry



Better—but not more expensive!

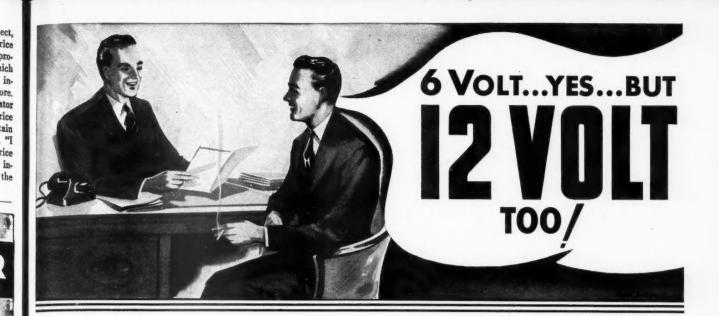
SHULER AXLES

SHULER AXLE CO.



DAYTON Spoke Type Steel
WHEES

AIR-COOL
BRAKE DRUMS AND TIRES
FOR TRUCKS, TRAILERS AND BUSES.
THE DAYTON STEEL FOUNDRY CO.
DAYTON, OHIO



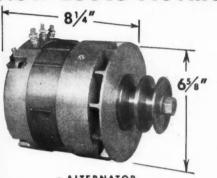
New Leece-Neville HIGH OUTPUT Generating System offers GREATER advantages in

12 VOLT SERVICE

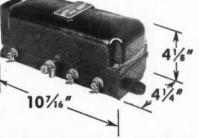
• Impressed by the many proved advantages of the new Leece-Neville HIGH OUTPUT, 6 volt generating system? Then consider this: A similar system—alternator, rectifier and voltage regulator—is now available for 12 volt operation, giving you all of the advantages of the 6 volt system in service where each counts more.

Here is a system that weighs much less than conventional D-C equipment (weight approximately 42 pounds)—and takes up much less space. Yet it can give you 100 amperes at idle speed, 100 amperes at full speed—and without danger of burn-out! Simplicity of alternator design (no commutator, no rotating armature windings, no cooling problem) means less maintenance. You save on installation because lower weight of alternator permits lighter brackets, less support. And you save on battery upkeep every single day, thanks to this system's sustained high current output over an engine's entire speed range. Write today for bulletin

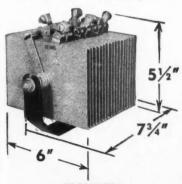
Similar 3-unit system for 6 volt service. RATING: 60 Amperes, 420 The Leece-Neville Co., Cleveland 14, Ohio.



WEIGHT 30 Pounds RATING . 14 Volts—100 Amperes



3-ELEMENT VOLTAGE REGULATOR
WEIGHT 4³/₄ Pounds
RATING . . 14 Volts – 100 Amperes



RECTIFIER
WEIGHT 7 Pounds
RATING . . 14 Volts—100 Amperes

LEECE-NEVILLE

Pioneer and STILL Quality Leader

CRANKING MOTORS . GENERATORS . VOLTAGE REGULATORS . SWITCHES

OCTOBER, 1946

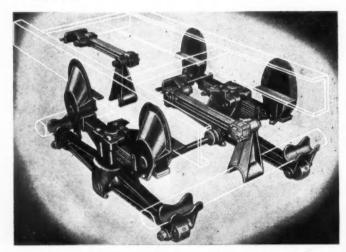
Use postage-paid card inserted at page 59 for free information on advertised products



But, the Hendrickson Tandem Axle Unit "levels them out"-to give you an easier pulling rig. Road irregularities are reduced

50%...pitching and tossing are eliminated. One of the many exclusive features of the Hendrickson Unit is the action of the equalizer beam shown in diagram (left), and it is one of the many reasons why a Hendrickson-equipped rig reduces tire costs, fuel costs and per mile costs.

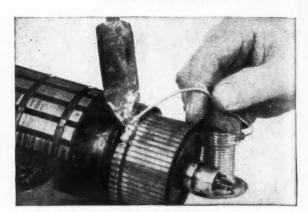
It will pay you to get more facts and advantages of the Hendrickson Tandem Unit. Write for Bulletin 21.



HENDRICKSON MOTOR TRUCK COMPANY Wabash Ave. at 36th Street **CHICAGO 15, ILLINOIS**



This Armature's Troubles are over . . .

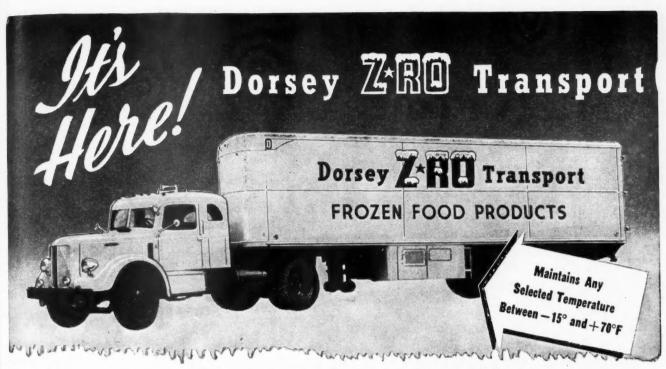


Fixed Permanently with KESTER Rosin-Core SOLDER

- Kester Rosin-Core Solder is the number one remedy for all electrical troubles in good fleet maintenance shops everywhere.
- That's because it's specially compounded by Kester for electrical work, with a patented, plastic rosin flux that won't cause corrosion or harm insulating material.
- Kester repairs are permanent...they don't shake loose under vibration, won't crack under bending or the expansion and contraction of temperature extremes. They help cut shop time and maintenance costs.
- Make Kester Cored Solders your shop standard...order them from your jobber.







The Frozen-Food Carrier of the Highways ...

For Safe and Profitable Hauling of—
Frozen Food • Frozen Vegetables • Frozen Meats
Frozen Fruits • Frozen Fish and All Perishables

NOW... you can handle frozen-foods in absolute SAFETY!... at the CONSTANT ZERO or lower temperatures consistently maintained by Dorsey Z-RO Transport.

Every detail of Dorsey Z-RO Transport has been thoroughly engineered . . . and thoroughly tested . . . to provide safe, economical, and efficient handling of frozen foods and all other perishables at any desired temperature between — 15°F and + 70°F, with accurate automatic maintenance of the temperature at the value desired

throughout the trip, with less than 5° variation regardless of outside weather conditions.

Dorsey Z-RO Transport is available as a COMPLETELY PACKAGED UNIT . . . ready for the road . . . in 24 to 32-foot lengths, fully insulated, all refrigeration installed, on single or tandem-axle chassis equipped with the famous Dorsey tubular axles and Dorsey constant-lift cam-type brakes. Capacities from 950 cu. ft. to 1,285 cu. ft.

When you think of hauling perishables or frozen foods . . . when you think of any low-temperature haul . . . think of Dorsey Z-RO Transport!

Dorsey Z-RO Transports Are Readily Available! Ask Your Nearby Dorsey Dealer for Full Particulars . . . Today!



DORSEY TRAILERS

ELBA, ALABAMA, U.S.A. LONFRN DESIGNED TRANSPORTATION

et

n

g

e

1-



INSTALL HYSPECO PRESSURE LIMITING VALVE

Install this proven Hyspeco Hydraulic Limiting Valve on the front wheel brake line, it restricts the amount of braking pressure applied to the front wheels and prevents locking and skidding on icy or slippery highways. It is of Bronze construction which prevents rust and corrosion and it has a sliding rubber valve seat which insures positive action and is not affected by dirt particles in the hydraulic brake system. It automatically maintains the hydraulic pressure for which it is set. Available with or without chrome dash knob adjustment. Easily and quickly installed. Meets all Interstate Commerce Commission regulations requiring front wheel brakes to have partial braking and not be disconnected.

Order today from your jobber or direct from

HYDRAULIC SPECIALTIES CO.

Designers and Manufacturers of Hydraulic Equipment

27 MECHANIC ST. . BUFFALO 2, N. Y.

MAINTENANCE CLEANING SELORT CUTS FOR AUTOMOTIVE SHOPS

How to Expedite FOUR Jobs With ONE Material!

When it comes time to figure costs, more and more fleet operators are discovering that these four day-in, day-out shop jobs

> Degreasing parts before repair Cleaning cooling systems Steam-cleaning motors and chassis Washing floors and work pits

tin

are done faster and easier, with important savings, if the cleaning material is

Oakite Penetrant

This water-soluble Oakite detergent, used in small concentrations, packs plenty of cleaning power . . . wets, penetrates and breaks up heavy deposits of oil, grease and dirt in less time and with amazing thoroughness! Non-flammable, easy-to-use, this all-purpose cleaner has been specified by leading fleet operators for many years. Bought in bulk it builds cash benefits in your service operations. Investigate it TODAY!

New 36-Page Service Booklet!

For job-born hints on speeding these four recurring tasks—plus many other in-shop cleaning chores—get your FREE copy of the New Oakite Automotive Manual. Contains shop-tested tips for faster cleaning of brake shoes before relining . . .reconditioning clogged radiators . . washing car and truck bodies. Your local Oakite Representative has your copy, or write us direct for one. No obligation.

OAKITE PRODUCTS, INC., 26D Tharmas St., NEW YORK 6, N. Y.
Technical Service Representatives Conveniently Located in All Principal
Cities of the United States and Canada

OAKITE Specialized CLEANING
MATERIALS: METHODS: SERVICE: FOR EVERY CLEANING REQUIREMENT



Saves Time...Saves Money

Bus drivers, truck drivers, and fleet owners know that stalls are costly. They lose money . . . may lose customers. That's why they know the value of traction insurance provided in this compact, easy-to-carry, auto NECESSory*. It pays for itself the first time it is used.

TIRE-TRACS Start Stalled Trucks Rolling at Once



This folding all-metal "half track" drops easily into position... provides positive traction . . . helps stalled truck pull from bad spots by giving gripping power to spinning wheels. It does not damage tire. Effective on all road surfaces.

Handy bumper pick-up cable tows TIRE-TRAC until convenient for driver to recover.

- * Exclusive Kass tread non-slip traction surface
- * Rust-proof treated—lasts years
- * Plates of two-ply steel, electro-welded, and firmly linked together
- * Forms rigid but flexible runway-traction studs grip both tire and road surface at same time . . . give double traction

FOLDS INTO COMPACT UNIT . . . FITS INTO TOOL KIT

(Model HD-for Trucks and Buses.) Double width; provided with handy web belt carrier.



ALSO AVAILABLE IN LIGHTWEIGHT MODEL FOR PASSENGER CARS

READY FOR IMMEDIATE DELIVERY

Every Tire-Trac is guaranteed by Morton Manufacturing Co. . . . fabricators of nationally known steel products for over 40 years. Available from your jobber or write:



MORTON MANUFACTURING COMPANY

Automotive Division

612 NORTH MICHIGAN AVENUE CHICAGO 11. ILLINOIS

* Trade-mark registration applied for

Copyright 1946, Morton Mfg. Co.



10 Important Features

of Stow Flexible Shaft Tank Pump Drives

The pump can be installed wherever most convenient for frequent inspection, regular lubrication, and proper attention to packing.

Pump, meter, and reel can be assembled as a compact unit anywhere on the truck!

3 The smooth working of the Stow Flexible Shaft minimizes wear on pump packing and bearings helps avoid leaky pumps!

4 Stow Flexible Shaft reduces end thrust on power take-off and pump shafts - keeps maintenance at a minimum!

Requires less piping — cuts piping costs — fewer joints result in less leakage!

6 Totally enclosed shaft assures complete safety!

7 Use of Stow Flexible shaft saves lay-ups keeps trucks in continuous operation trouble-free service!

Stow Flexible Shaft automatically compensates for relative movement between the pump and power take-off resulting from distortion of the chassis frame caused by uneven roads!

Stow Flexible Shaft is engineered to absorb all shock loads!

Stow Flexible Shaft can be installed by any mechanic. The facilities of an ordinary garage are adequate. Installation cost is a fraction of that of any other drive!

TANK TRUCK OPERATORS! Write! We have special literature available which will enable you to obtain information on the most satisfactory operation of Tank Truck Pumps, regardless of location

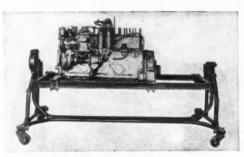


MANUFACTURING CO.

38 Shear St. BINGHAMTON, N. Y.



Here Is the Engine Overhaul Stand That Handles All Automotive Engines Up to 3,000 lbs. Weight



UNIVERSAL MODEL AC-4

Entire frame can be rotated to place the engine block in any desired position. Side rails may be adjusted in or out. End sections may be raised or lowered. Mounting plates provided can be mounted either above or below rails and clamped in any position along frame.

Write Clayborne Manufacturing Company, Dept. "J", 209 South La Salle Street, Chicago 4, Illinois, for completely illustrated descriptive literature. In Canada, address James B. Carter, Ltd., Winnipeg.





There's many a dollar that you lose on "payload" profits when engine speeds are not maintained within specified maximum and minimum limits, regardless of transmission gear(s) employed during any trip. With JONES TACHOMETERS on the dashboards, your drivers can

always lare over ing, and handling maximum economy tion.

JONES T

Type 1081 JONES TACHOMETER with range indicated. always know exactly when they are overspeeding or underspeeding, and thereby adjust their handling of their engines to get maximum horsepower and greater economy in gasoline consumption.

JONES TACHOMETERS quickly pay for themselves in fuel savings, lower truck maintenance, and as a guard against accidents.

Bulletin on request.

The NOVEMBER Issue of COMMERCIAL CAR JOURNAL

will be the Seventh
"Highway Transportation
Show - In - Print"

Don't Miss It

Its Special Features Will Be Worth Money to You

JONES MOTROLA CORP.

FAIRFIELD AVENUE STAMFORD, CONN.



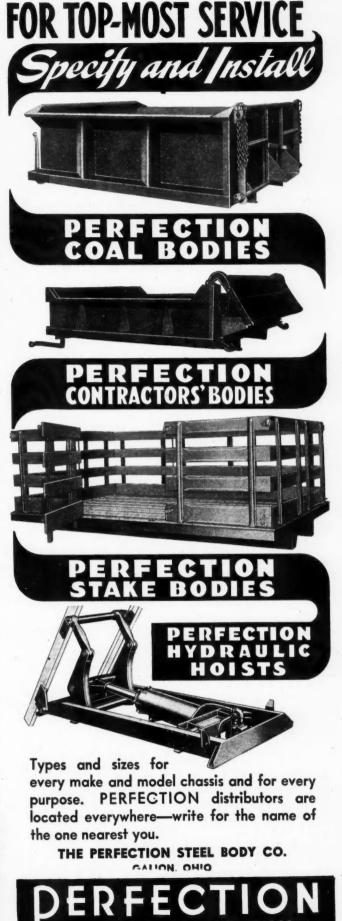
SURE-FOOTED SAFETY

Campbell Lug-Reinforced Tire Chains

Campbell Lug-Reinforced Tire Chains are radically different! The exclusive* saw-toothed lugs cut right into snow and ice for the grip that assures safe starts and stops without dangerous slip and skid. What's more, tough, hard-wearing steel, and one-piece construction, mean increased chain mileage! International Chain and Mfg. Company, York, Pennsylvania.



*U. S. Pat. No. 2,093,547—Canadian Pat. No. 223,568



We hope soon to announce the return of the FINEST INSULATION!

DRY-ZE

- Made of Ceiba fiber . . . SEVEN TIMES LIGHTER than commercial corkboard . . . can't absorb moisture by capillary attraction . . . doesn't rot, pack down or absorb odors . . . maintains low thermal conductivity of .24 B.T.U. throughout the life of the installation.
- Just as soon as DRY-ZERO is available we will make an announcement in this publication.

DRY-ZERO CORPORATION Dept.6N-10Merchandise Mart Chicago 54

W Portable M

This new "KING" Tester was especially designed for Jobbers' counters, service stations, smaller repair shops, fleet owners, ranches and also as an auxiliary

unit in larger repair shops. It will quickly and accurately make all coil, condenser and spark plug tests. The "KING" MT-88 has the new "KING" meters - it will test coils on or off the car and a coil heater is also incorporated. This unit is portable, but an attractive base may be purchased at additional cost.



"KING" MT-88

Ask Your Jobber or Write Us

The ELECTRIC HEAT CONTROL Co. 9127 INMAN AVENUE . CLEVELAND 5, OHIO GOOD "KING" PRODUCTS SINCE 1914

Hauls LARGER Payloads At Less Cost.. More Profits!

Equip Your Trucks with

LITTLE GIANT

TEN WHEELERS - FRAME EXTENSIONS



4 Ten Wheelers

Increases hauling capacity up to 20 tons. Keeps load in perfect balance — no teeter or end-sway. Ex-tends frame from 42 to 50 inches. Simple, sturdy-no



4 Frame Extensions

Cut-frame and silp-on types. Adds any desired length to chassis. Simple —sturdy—easily installed. Absolutely dependable— thousands in use.

PROMPT DELIVERY

Write for Complete Details and Low Prices

PRODUCTS, INC.

PEORIA 3, ILLINOIS



NOW AVAILABLE

Coming off the new production lines in Chicago, the SHELDON. SHELDON-Vernon Precision Machine Tools* are now available at the same moderate prices that made them first in the moderate priced field. Built in the new modern SHELDON plant which is equipped with every advanced machine tool building facility, they are better than ever—even more accurate, more rugged and better finished.

Lighter and smaller and less costly than machine tools of equal accuracy, they provide a faster, more convenient and but the heaviest operations.

Write for Bulletin on:

Write for Bulletin on:

*SHELDON-Vernon Horizontal
Milling Machine
*SHELDON-Vernon Vertical
Milling Machine and Jig

Borer *SHELDON-Vernon 12" Shaper Builders of Good Lathes Since 1919

SHELDON MACHINE CO., INC. 4221 N. Knox Ave., Chicago 41, U.S.A.

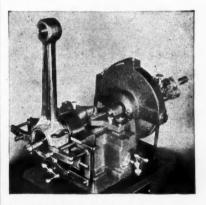








TOBIN-ARP Rod Boring Attachment



Is Fast Accurate Compact

Bores semi - finished babbitted rods, inserts in the rod and the rod forging itself. Designed to fit our Shell Bearing Bor-

ing Machine. Convenient to use. Handles all rods up to and including R. D. 8 Caterpillar Diesel. For resizing V8 Ford rods quickly, it can't be beat.

Write for complete details on it, also ask for particulars on our Shell Bearing Boring Machine and Line Boring Machine.

TOBIN-ARP MFG. CO.

2845 Harriet Ave. S.

Minneapolis 8, Minn.



Dependable quality drive shaft assemblies for passenger cars, trucks and busses.

Consult your local Almetal jobber for assistance on your Universal Joint problems.

THE ALMETAL UNIVERSAL JOINT CO. 1555 EAST 55th STREET · CLEVELAND 3, OHIO

MAINTENANCE MEN WHO KNOW

The Complete Line
of AUTOMOTIVE
CHEMICALS

SPECIFY .

There is a Flare chemical for every automotive need. Flare quality is unexcelled. Specify Flare for added trouble-free mileage. Many Flare chemicals packed in shop size containers for economical truck maintenance. Ask your supply house!

FOR CAR BEAUTY
AND CARE USE
Flore



THE BELL COMPANY, INC.

SIOUX "Resin-Bond" Phenol Abrasive Discs

not only cut FASTER and with less effort—but they stay "as COOL as a cucumber" even after long punishing service. They're flexible, tough, long-lasting, non-loading — due to the Resin Bond-Tem-



pered Aluminum Oxide grain and moisture proof fibre

Authorized SIOUX Distributors Have Them



ALBERTSON & CO., Inc.

Sioux City, Iowa, U.S.A.

STANDARD THE WORLD OVER

FOR SAFETY
LIGHTING and EQUIPMENT DO-RAY
ALL THE WAY

PROCEED STAFF
LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

LCC.
STAFF

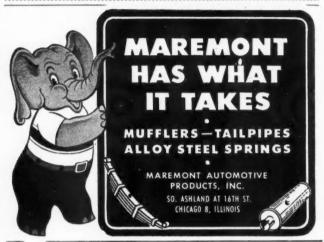


MOTOR TRUCKS SINCE 1907

PIONEERS OF THE INDUSTRY

Quality Builders of Heavy Duty Gasoline and Diesel Powered Motor Trucks for On and Off the Highway Service

STERLING MOTORS CORPORATION
MILWAUKEE 1. WISCONSIN





Your Adjustment

Push it back or forth; up or down. Extension 14" to 22".



Ball and socket joint has built-in spring tension.

illustration shows one truck-model mirror at 3 angles, 3 lengths.

WHITEHEAD

STAMPING CO.

Detroit 16, Michigan



 Has shatterproof glass jar. Gives highly accurate readings corrected for temperature. Simplifies testing — gives service instructions on barrel. Easy to read... handy to use...compact.

THE IMPERIAL BRASS MFG. CO., 1209 W. Harrison St., Chicago 7, III.

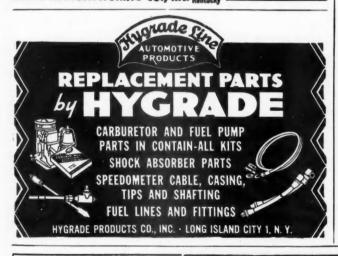




REFLECTORS AND FLARES for Safety.

GROTE MANUFACTURING CO., Inc. Bell

AUTOMOTIVE SALES OFFICE MOORESTOWN. NEW JERSEY









SNUGL FAD-A-WAY **AUTOMOTIVE** WHEEL BALANCING WEIGHTS TRUCKS . BUSES . PASS. CARS SNUGL PAT. NO. D-119-321-D-5189 MID-WESTERN AUTO PARTS (FACTORY) 824 E. ELM ST. KOKOMO, INDIANA

EASY TO USE

No special equipment or training needed OFTEN IMITATED

MILLER MFG. CO.



KEEP 'EM ROLLING

MID WESTERN AUTO PARTS

Whittler, Calif.

736 S. Greenleaf

Have Wonder Seal always on hand for emergencies NEVER EQUALLED

CAMDEN, N. J.



SCULLY ΆΙ

The Whistling TANK FILL SIGNAL

SCULLY SIGNAL COMPANY, 88 FIRST ST., CAMBRIDGE 41, MASS

tank prevents blow-backs.
VENTALARM prevents spills during filling. VENTALARM prevents spillage

due to temperature changes.



AC Spark Plug Div31-156	Dry-Zero Corporation 280
Airtex Automotive Division 24 Albertson & Co., Inc 282	Duro Metal Products Co 250
Allegany Oil Company 266	Eaton Manufacturing Co. (Wilcox- Rich Div.)
Allied Motor Parts Co	Eherhard Mfg. Co., Div. of the
Aluminum Co. of America3rd Cover	Eastern Malleable Iron Co 202
Aluminum Industries, Inc 133	Econite, Inc
Amalie Div., L. Sonneborn Sons,	Edwards Iron Wks., Inc
Inc	Elastic Stop Nut Corp 242
American Automatic Devices Co 201 American Bosch Corp 159	Electric Auto-Lite Co12-13-110-111
American Brakeblok Div 169	Electric Boat Co
American Chain & Cable Co.,	Electric Heat Control Co., The 280 Electric Storage Battery Co., The 73
Inc30-86-140	Electric Storage Battery Co., The 73 Emerol Mfg. Co., Inc 208
American Grease Stick Co 210 American Hammered Piston Ring	Empire Electric Brake Co 208
Div. Koppers Co., Inc 171	Ethyl Corporation 21
American Magnesium Corp 187	Evans Products Co
American Safety Tank Co 268	Excello Specialty Co 266
American Steel & Wire Co 249	F. A. B. Mfg. Co 194
American Steel Foundries 142 Ansul Chemical Co. (Fire Extin-	Federal-Mogul Service 77
guisher Div.)	Federal Motor Truck Co 103
Armstrong Rubber Co 165	Felt Products Mfg. Co
Arrow Safety Device Company 270	Fitzgerald Mfg. Co., The 268
Austin Trailer Equipment Co 124	Flare Laboratories Div 282
Auto-Lite Battery Corp110-111	Flower City Specialty Co 268
Automotive & Aircraft Div. Amer.	Ford Motor Co
Chain &Cable Co 86	Back Cover
Autopulse Corp	Fram Corporation 149
Available Truck Company 264	Freedom-Valvoline Oil Co 75
Barrett Equipment Co 145	Frink, Carl H., Mfr
Belden Manufacturing Co 161	Fuller Manufacturing Co 16
Bell Co., Inc., The	
Bishman Mfg. Co	Galion Allsteel Body Co 141
Blood Brothers Machine Co 154	Gar Wood Industries, Inc
Blue Crown Spark Plug Co 264	Gatke Corporation 105
Bonney Forge & Tool Wks 177	Gemmer Mfg. Co 131
Bostrom Manufacturing Co 191 Bower Roller Bearing Co 238	General Detroit Corp., The 15
Braden Winch Co 135	General Electric Company240-259 General Tire & Rubber Co 6-7
Buell Mfg. Co	Gerlach Co., E. A
	Globe-Union. Inc266
Cal-Van Machine Products, Inc 272	Goodrich Co., B. F
Cam Tool Company, Inc 152 Campbell & Reynolds 272	Goodyear Tire & Rubber Co 68 Gray Alloy Metals Company 270
Carnegie-Illinois Steel Corp 249	Grico Two Axle Drive Co 264
Carter Carburetor Corp 195	Grizzly Mfg. Co 188
Casite Corporation	Grote Mfg. Co
Central Tool Co., The	Guide Lamp Div
Champion Spark Plug Co 9	Gunite Foundries Corp 164
Chicago Pneumatic Tool Co196-197	
Chrysler Corp. (Parts Div.) 203	Hall Mfg. Co., The
Cities Service Oil Co	Hansen Mfg. Co., A. L
Clark Tructractor Div 166	Hastings Manufacturing Co 115
Classified Advertisement 264	Heil Co., The 272
Clayborne Manufacturing Co. 279	Hein-Werner Motor Parts Corp 225
Clayborne Manufacturing Co 278 Cleveland Hardware & Forging Co. 90	Hendrickson Motor Truck Co 274 Highway Safety Appliance 114
Columbia Steel Co	Highway Trailer Co
Columbus-McKinnon Chain Corp 158	Holland Hitch Co 266
Continental Motors Corp 214	Hollingshead Corp., R. M 8
Cooper Corporation, The 283 Crescent Co., Inc., The 220	Homestead Valve Mfg. Co 262 Hoof Products Co 84
Cummins Engine Co 1	Hydraulic Specialties Co 276
Curtis Pneumatic Machinery Div.	Hygrade Products Co., Inc 283
of Curtis Mfg. Co 200	Imperial Proce Mr. Co mt.
Dart Truck Company 268	Imperial Brass Mfg. Co., The 282 Inland Rubber Corp 213
Dayton Rubber Mfg. Co., The 232	International Chain & Mfg. Co 279
Dayton Steel Foundry Co., The 272 Delco Products Div	International Harvester Co 34
De Luxe Products Corp 254	Jones Motrola Corp 278
Detrex Corporation 160	
De Vilbiss Co., The 244	K-D Lamp Co204-205
Diamond T Motor Car Co 85 Diamond Rubber Co	K-D Mfg. Co
Dodge Div. of Chrysler Corp	Ken Tool Mfg. Co 268
2nd Cover	Kester Solder Co 274
Dole Valve Co	King-Seeley Corp 128
Do-Ray Lamp Company 282 Dorsey Trailers 275	Kingham Trailer Co., Inc. 174 Kinnear Mfg. Co., The 272
Dravo Corporation 266	Kold-Hold Mfg. Co 190

Rich Div.)	2
Rich Div.)	02
Econite Inc 2	81
Edwards Iron Wks., Inc 2	57
Eis Automotive Corp., The 2	12
Elastic Stop Nut Corp	42
Electric Boat Co	67
Electric Heat Control Co., The 2	80
Electric Storage Battery Co., The	73
	80
	08 21
	64
	66
= 4 P 344- G-	0.4
	94 77
Federal Motor Truck Co 1	03
	64
	86
Fitzgerald Mfg. Co., The	82
Flower City Specialty Co 2	68
Ford Motor Co 2	21
Four Wheel Drive Auto Co.	
Fram Corporation	
Fram Corporation	75
Frink Carl H Mfr 9	66
Fruehauf Trailer Company	83
Fuller Manufacturing Co	16
Galion Allsteel Body Co	141
Gar Wood Industries, Inc 2	58
Gates Rubber Company128-1	29
Gatke Corporation 1	31
	15
General Electric Company 240-	259
General Tire & Rubber Co	5-7
Globe Union Inc.	26
Globe-Union, Inc	107
Goodyear Tire & Rubber Co	68
Grav Allov Metals Company	270
Grico Two Axle Drive Co	264
Grote Mfg. Co	283
Guide Lamp Div	95
Gulf Oil Corp	269
Gunite Foundries Corp	164
Hall Mfg. Co., The	130
Hansen Mfg. Co., A. L	69
Haskelite Mfg. Corp	223
	115
Hein-Werner Motor Parts Corp.	272 225
Hendrickson Motor Truck Co	274
Highway Safety Appliance	114
Holland Witch Co	139 266
	8
Homestead Valve Mfg. Co.	262
Hoof Products Co	84
Hydraulic Specialties Co	276
Hygrade Products Co., Inc	483
Imperial Brass Mfg. Co., The	282
Inland Rubber Corp	213
International Chain & Mfg. Co	2 79
International Harvester Co	34
	278
K-D Lamp Co204-	205
K-D Mfg. Co	26
Ken Tool Mfg. Co	268
Kester Solder Co	274
King-Seeley Corp. Kingham Trailer Co., Inc	123
Kinnear Mfg. Co., The	272
Kinnear Mfg. Co., The Kold-Hold Mfg. Co	190

Index to

This Advertisers' Index is published of the advertising contract. Every rectly. No allowance will be made

Koppers Co., Inc., American Ham-
mered Piston Ring Div 171
Koylon Foam Division 253
Krieger Steel Sections, Inc 211
laitner & Sons. A 74
Laitner & Sons, A
Leece-Neville Co., The
Leonard Spark Plug Co., Inc 278
Libbey-Owens-Ford Glass Co 241
Lindsay Corporation, The 81
Lion Oil Co 237
Lipe-Rollway Corp 264
Little Giant Products, Inc 280
Long Mfg. Div. Borg-Warner Corp. 97
Lynch Manufacturing Corp 175
McCreary Tire & Rubber Co 104
McCreary Tire & Rubber Co 104 Mack Trucks, Inc 92
Manley Mfg. Div 30
Mansfield Tire & Rubber Co118-119
Maremont Automotive Prod., Inc., 282
Marmon-Herrington Co., Inc 32
Marmon-Herrington Co., Inc. 32 Marquette Mfg. Co., Inc. 184 Martin-Senour Co., The 217
Martin-Senour Co., The 217
Marvel-Schlebler Carburetor Div. 283
Michiana Products Corp 172
Mid-Western Auto Parts 283
Miley Co., L. J
Miller Mfg. Co
Milwaukee Dustless Brush Co 216 Minnesota Automotive, Inc 151
Mohawk Rubber Co., The 261
Monmouth Products Co 155
Monroe Auto Equipment Co 222
Moog Industries, Inc 266
Morton Mfg. Co
Mount Vernon-Woodberry Mills 199
Notional Automotive Posts Assn
National Automotive Parts Assn., 162-163
National Tube Co 249
New York Air Brake Co 231
Niehoff, C. E., & Co 87
Oakite Products, Inc 276
Ohio Oil Company
Ohio Piston Co., The
Owatonna Tool Co 108
Owatomia 2001 Continue
P. & D. Manufacturing Co., Inc 178
Packard Electric Div 234
Palm Bros. Decalcomania Co 270
Pedrick Piston Rings 272
Perfect Circle Co., The
Permatex Co., Inc
Permatex Co., Inc 3
Pittsburgh Plate Glass Company 200
Prest O Lite Battery Co., Inc 246
Prior Products, Inc 236
Puritan Company, Inc 264
Purolator Products, Inc 272
Pyrene Mfg. Co146-265
Quaker State Oil Refining Corp 183
Quality Tools Corp 266
Ramsey Corporation 270
Reo Motors, IncFront Cover Republic Steel Corp219
Richardson Regulator, Inc. 245
Richardson Regulator, Inc 245 Roadmaster Products Co 255
Rowland, Inc., Wm. & Harvey 126

Advertisers

a a convenience, and not as part are will be taken to index corfor errors or failure to insert

SKF Industries, Inc	268
Safety & Maintenance Co., Inc	157
St. Paul Hydraulic Hoist Co	33
Schrader's Son. A	206
Scully Signal Co	283
Service Recorder Co., The	132
Shand & Jurs Co	198
Sheldon Machine Co., Inc	280
Shell Oil Co., Inc	117
Shuler Axle Co	272
Siebring Mfg. Co	134
Signal-Stat Corporation	
Sinclair Refining Co	248
Smith, U. K	
Snap-On Tools Corporation	125
Snyder Tank Corporation	270
Socony Vacuum Oil Co., Inc192	
Sonneborn Sons, Inc., L	
Speaker Corp., J. W	
Spicer Mfg. Div	
Standard Forge & Axle Co	185

Standard On Co. (Indiana)	T
Standard Pressed Steel Co 24	7
Stanley Co., Inc., John T 15	0
Sterling Motors Corporation 28	2
Stevens-Walden, Inc 21	2
Stewart-Warner Corp 10	9
Stow Mfg. Co	
	9
Sweeney Mfg. Co., B. K 18	
birectory arig. Co., D. M	
T & H Mfg. Co 26	8
Teleoptic Co., The	6
Tennessee Coal, Iron & R. R. Co 24	
Texas Co., The 4-	5
Textileather Corp 27	1
Thermoid Company 20	7
Thompson Products, Inc 14	7
Tide Water Asso. Oil Co136-13	
	0
Timken Roller Bearing Co 22	
Tobin-Arp Mfg. Co	
Trailmobile Co., The22-2	
Trico Products Corp 22	
Truckstell Co., The	
	8
Tulsa Winch Division 22	
Turk Corp., C. K	
Turk Corp., C. II	, ,
U. S. Axle Co., Inc 14	18
Union Metal Mfg. Co., The 8	39
United States Asbestos Div. Ray-	
bestos-Manhattan, Inc 2	20
United States Rubber Co.,	
28-29-253-28	86
United States Steel Co 24	49

Vickers, Inc.	127	
W. G. B. Oil Clarifler, Inc	233	
Wagner Electric Corp181		
Walter Motor Truck Company	99	
War Assets Administration218	-260	
Ward La France Truck Div., Great		
American Ind., Inc	230	
Warner-Patterson Co	144	
Waukesha Motor Co	263	
Wausau Motor Parts Co	251	
Waverly Petroleum Products Co	157	
Wayne Pump Co., The	138	
Webb Manufacturing Co	285	
Wedler-Shuford Co	264	
Wellman Co., S. K., The	266	
White Motor Co., The	67	
Whitehead Stamping Co	282	
Wilcox Rich Div	2	
Wilkening Mfg. Co	272	
Willard Storage Battery Co	27	
Williams & Co., J. H	229	
Wiry Joe	220	
Wix Accessories Corp	235	
Wohlert Corp	272	
Wolf's Head Oil Refining Co., Inc	215	
	4.00	
Yankee Metal Prod. Corp		
York-Hoover Corporation	. 14	
Zehr Products Co	268	
Zollner Machine Works		

you can order TAILORED TRUCK COVERS in a matter of minutes

With this new, easy-to-use Webb Truck Cover Guide, ordering Truck Covers, made-to-measure for accurate fit is almost as simple as signing your name. No laborious drawings or lengthy details required. Pick out the body style of your truck from those illustrated, follow the simple instructions and you will receive a cover which will fit as accurately as though your truck was brought to the shop for fitting. Why risk costly cargo damage when these long-wearing, tailored Webb Truck Covers are so easy to order. They give extra savings through more mileage for every dollar you spend for protection.

WEBB MANUFACTURING COMPANY

2926 North Fourth Street, Philadelphia 33, Pa.







Pays a Bonus in Plus Miles

Operators who have changed to FISK, with DOUBLE RAYON construction find that service accidents are reduced materially in number and cost of repair. Consequently they're enjoying mileage bonuses beyond their expectations.

Much of this double gain can be ascribed to DOUBLE RAYON . . . Fisk's own tire cord. It withstands impacts better, wards off ruptures, gives you a tire body that can be recapped again and again. Eight plies do the work of ten and do it better.

Fisk Truck Tires with DOUBLE RAYON cost you no more than ordinary tires . . . but make a whale of a difference in plus miles in your favor! Fisk Tire Company, Division of United States Rubber Company.

FISK TRUCK TIRES



CONSOLIDATED FREIGHTWAYS FREIGHTLINERS depend on Alcoa Aluminum to go light with Alcoa Aluminum. Your equipment can em-

Aleoa Aluminum castings, extruded shapes, sheet and plate appear in all these places in Consolidated Freightways' Freightliner trucks and trailers—put there after long testing had proved, in every case, that they save weight with safety ploy these same weight-saving items. Our engineers will advise you. Call the nearby Alcoa office, or write ALUMINUM COMPANY OF AMERICA. 2139 Gulf Building, Pittsburgh 19, Pennsylvania.

Air tank brackets

Chassis parts:

Brake shaft brackets

Brake shoes Clutch and brake brackets Cab skirting

Fuel tank brackets Front spring hanger brackets Fifth wheels Front spring shackles

Bumper

Axle housing

Clutch pedal arms

Cab floors

Axle spider torque brackets **Dust shields** Cab sides, top and back Differential bowls





Horn brackets

NAL

Main frame brackets Radiator connections

Rear axle spring seats Motor supports Trailer frames

Truck cross shaft brackets Radiator grille Trailer cross shaft brackets

Truck and trailer diaphragm brackets Truck hubs

Body parts: Inner linings Top and floor

Trailer hubs

Side members

Truck equalizers

Exterior skin of trucks and trailers

Floor plates

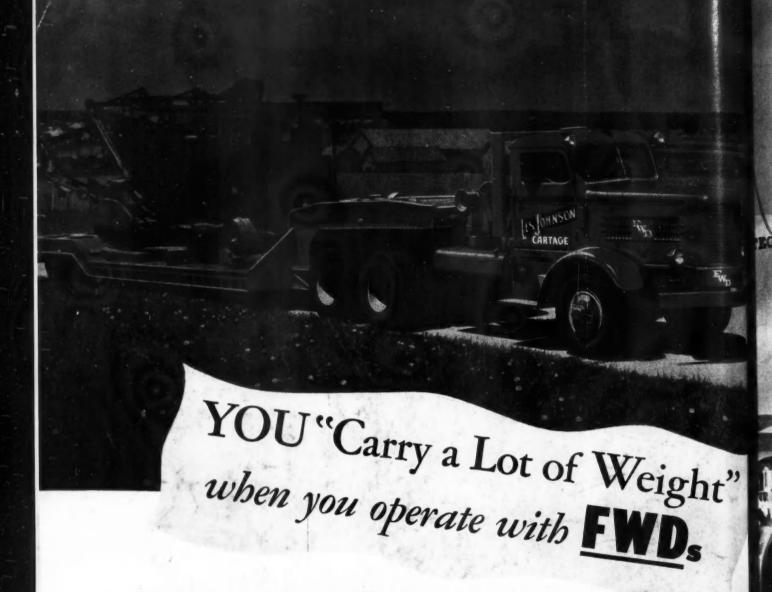
Roof bows Sills

Side rails

ALCOA ALUMINUM



EVERY COMMERCIAL FORM



You have real business advantages that "carry a lot of weight" when you have FWD four-wheel-drive or sixwheel-drive trucks working for you. Their dependability is recognized throughout the field of motor transport and commercial trucking. Their ability to "do the job" at low-cost-per-ton-mile becomes a credit to you. They stay on the job for more hundreds of thousands of miles of productive hauling, with less down-time for maintenance, or replacements, less gas, oil and tire expense, greater safety. Rugged FWDs are sound business assets.

See the nearest FWD Distributor or write for literature.



FOUR WHEEL DRIVE AUTO COMPAN

Canadian Factory: Kitchener, Ontario